DOCUMENT RESUME

ED 300 025 IR 052 522

AUTHOR Zachert, Martha Jane K.
TITLE Teaching Skills for Library Educators. CE 626. Second Edition.
INSTITUTION Medical Library Association, Chicago, Ill.
PUB DATE 82
NOTE 92p.
PUB TYPE Guides - Classroom Use - Materials (For Learner) (051) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Andragogy; Course Descriptions; Course Objectives; *Educational Planning; *Instructional Development; Learning Activities; Learning Theories; Library Education; *Library Instruction; Material Development; Medical Libraries; Postsecondary Education; Professional Continuing Education; Student Characteristics; Student Evaluation; *Teaching Methods; *Teaching Skills

ABSTRACT

This course text outlines the objectives and content for a professional continuing education course on teaching skills for health science librarians. It is intended for librarians planning to teach as peer instructors in library science continuing education, instructors or internship mentors in graduate library school education, supervisor-instructors for inservice training in libraries, or instructors in bibliographic or other instruction of library users. Topics are divided into four sections which cover: (1) underlying concepts for teaching adults--teaching/learning as a system, learning theory and the teaching of adults, and the nature of planning for teaching and learning; (2) steps in planning teaching/learning--identifying instructional goals, writing behavioral objectives, developing instructional strategies, developing instructional materials, and evaluation; (3) implementation skills--attitudes, lecturing, leading/guiding instruction, demonstrations, managing classroom activities, conducting evaluations, and using media; and (4) examples of instructional materials. The first three sections include bibliographies. (MES)

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CE 626

Teaching Skills for Library Educators

Martha Jane K. Zachert, Professor
College of Librarianship
University of South Carolina

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First edition, 1976
Second edition, 1982

Introduction

This course-text is intended for use in preparation for and during group instruction. The primary anticipated audience is one of health science librarians who are preparing to teach in one or more of the following ways: (1) as peer instructors in library science continuing education, (2) as instructors or internship mentors in graduate library school education, whether full-time or adjunct members of such facilities, (3) as supervisor-instructors for in-service training in libraries, and (4) as instructors in bibliographic or other instruction of library client-users.

Because the primary audience is expected to be health science librarians, most of the examples and class demonstrations are in terms of health science librarianship. The text, however, is in more general terms and all principles are applicable in any library-related teaching--indeed, in most other adult teaching/learning situations. Thus this manual will yield information and advice for those unable to attend the CE 626 course. Demonstrations, lab sessions, learner/teacher dialog and insight from exchanges among class participants will, of course, be lost without the group experience.

Because the course-text and the classroom activities go hand-in-hand, the importance of reading this text in advance of class attendance cannot be overstressed. Everything in the text will be included in the class, though different parts will be included in different ways. Some will be referred to only casually; some will be the basis of further explication; some will be used in group activities. All topics, both in the text and in the classroom, are treated in an introductory way. The subject of teaching, like its corollary learning, is large and multifaceted; it cannot be "covered" in a day or two or in a single text. The skills of teaching require practice, reinforcement, feedback and more practice until a personal style and a personal repertoire develop. This will not happen in a day so both text and course are intended as a first step on what is hoped will be a career-long path.

The bibliographies throughout this course text are those from which the content has been condensed, synthesized, extrapolted or quoted, plus additional works which the writer has found valuable. The bibliographies are, therefore, highly selective from the point of view of the author, a teaching librarian without formal training in either pedagogy or andragogy and they are recommended reading for others in the same situation. They are not buying lists for health science libraries, even those which are heavily involved in educational services. The headings and annotations of the bibliographies are planned to highlight the values and rewards of each item for the intended audience. All works included are recent and readily available in collections for professionals in the field of education. Any item considered for purchase in a health science library should be inspected before it is ordered.

Developing CE 626 has been a rewarding exercise in cooperation. Many "classes" have shaped it, not the least the group of twenty-three persons, mostly Medical Library Association instructors themselves, who spent two

very hard-working days on the experience at the conclusion of the 1982 annual meeting in Anaheim. Their participation and feedback have been invaluable. Also invaluable to the final product have been the substantive comments and technical support of CE 626's additional teachers, Diana Northup and Nancy Press. Since the initiation of the MLA CE Committee's liaison system first Holly Shipp Buchanan and presently Neil Kelley have filled this role with wisdom, tact and --always--good will. Last only in the sense of being the nearest and most crucial support to each individual presentation of the course is Barbara Baxter of the MLA Division of Education who is wise beyond her years and patient beyond all reasonable expectation. If CE 626 is as meaningful as its author and the CE Committee intend it to be, it is because of these people--past members of the class, additional teachers, committee liaisons and headquarters staff. Wherein the text does not measure up to expected levels of accuracy or helpfulness, the responsibility is mine.

Martha Jane K. Zachert
Columbia, S. C.
October 1982

CE 626. TEACHING SKILLS FOR LIBRARY EDUCATORS

Course Description:

An overview of basic planning and teaching skills plus an introduction to innovative strategies for improving adult learning. The course will include exhibits of new materials, demonstration of methods and the personal involvement of registrants. All examples included are related to the continuing education of health sciences librarians; they are, however, generalizable to education for the practice of librarianship in any kind of library as well as to library technicians and library school students. All course content, and some examples, also relate to bibliographic instruction in libraries. The course does not include curriculum planning or the management of continuing education programs.

Intended audience: Individual teachers, whether they teach in-service training courses, continuing education courses or workshops, formal courses as in graduate library schools, or bibliographic instruction.

Course Objectives:

Cognitive Objectives: At the conclusion of the course the student should be able to:

1. Describe and explain the concept "teaching/learning system;"
2. Recognize salient characteristics of adult learners and explain their implications for library-related education (bibliographic instruction; in-service training; professional instruction; CE);
3. Describe and carry out the steps required in planning learning experiences;
4. Differentiate between different teaching methods, linking each with appropriate kinds of content and learning expectations;
5. Summarize important reasons for conducting formal evaluations of teaching/learning activities and the major ways of doing so.

Experiential Objectives: During the course, students will be able to participate in and respond to the following teaching methods:

1. Lecture
2. Question and answer interaction
3. Group discussion
4. Instant panel
5. Task-oriented work group
6. In-basket exercise
7. Action maze
8. Roleplay
9. Learning game

From these experiences each student should be able to:

1. Assess personal response to each method, as a learner;
2. Assess each method for its usefulness in personal teaching;
3. Characterize personal teaching style;
4. Plan personal development as a teacher.

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PART I. UNDERLYING CONCEPTS FOR TEACHING ADULTS

A. Teaching/Learning as a System 3

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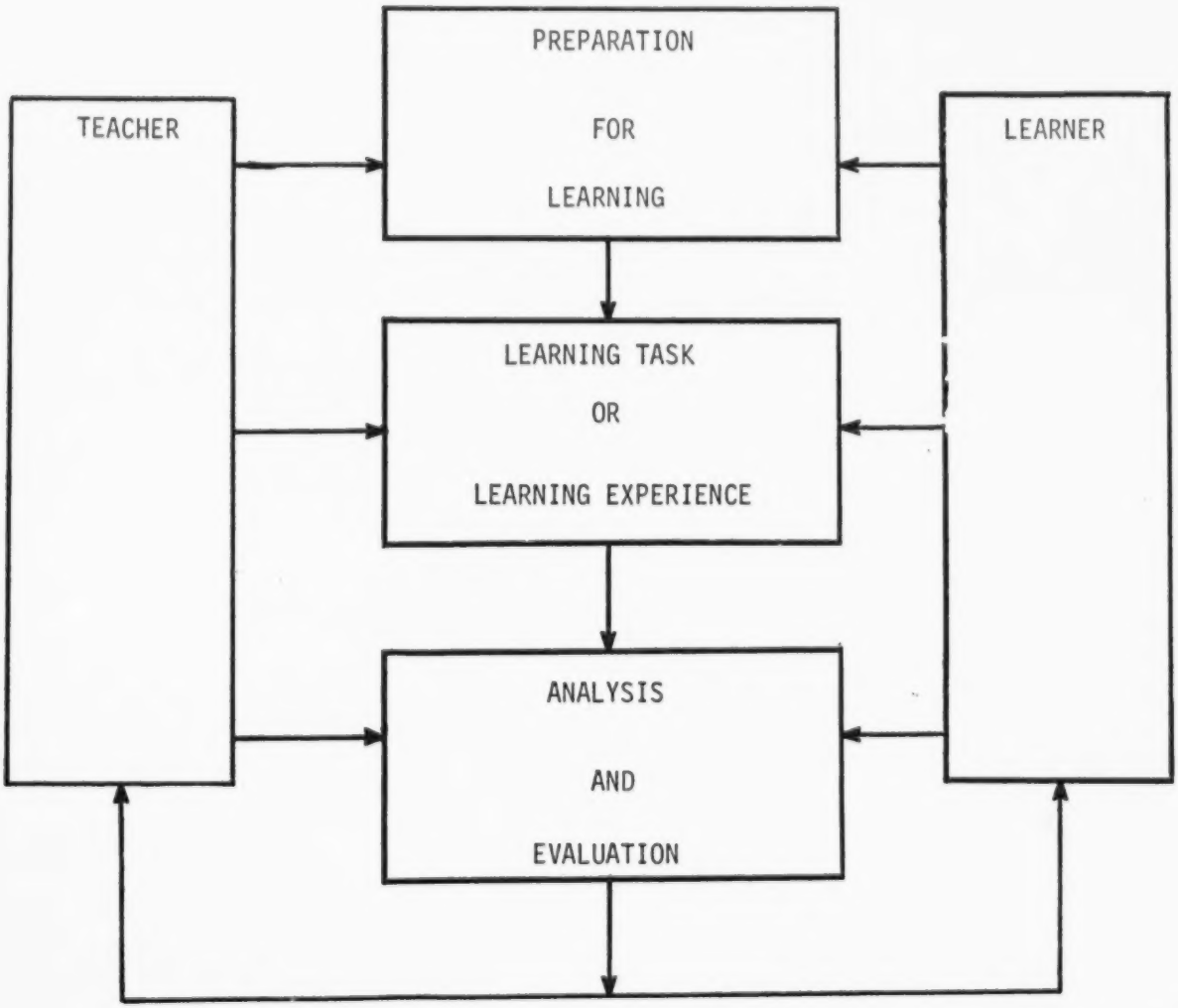
PART I. UNDERLYING CONCEPTS FOR TEACHING ADULTS

A. TEACHING/LEARNING AS A SYSTEM

In this course, "Teaching Skills for Library Educators," learning is viewed as a system, and the basic philosophy of systems thinkers prevails: change in any part of the system changes the system. The basic system is comprised of preparation, a learning task or experience and evaluation, each of which is related to both teacher and learner.

FIGURE 1. TEACHING/LEARNING AS A SYSTEM



It is typical in library science education to think of the "system" as equivalent to the "course," in which preparation is information input either by student reading or teacher lecture, the learning task is either memorization, practice or project, and evaluation is a final exam. In many courses the basic concept applies to units in the course as well as to the course as a whole. The concept can be profitably applied to single class meetings, especially when classes meet weekly for 3-4 hours for a quarter or a semester (as is characteristic of most of the health sciences librarianship graduate school courses) or daily, but intensively, for a shorter overall course (i.e., 3-4 hours daily for 4-6 weeks, which is a secondary pattern for the formal teaching of health sciences librarianship). The great advantage of thinking of each class session as comprising the entire learning sequence is that it places the teacher in a position to see more clearly the close interrelationships of the components of the system.

Both teacher and learner have roles in this system. These roles converge, but they are different. (Figure 2, page 6)

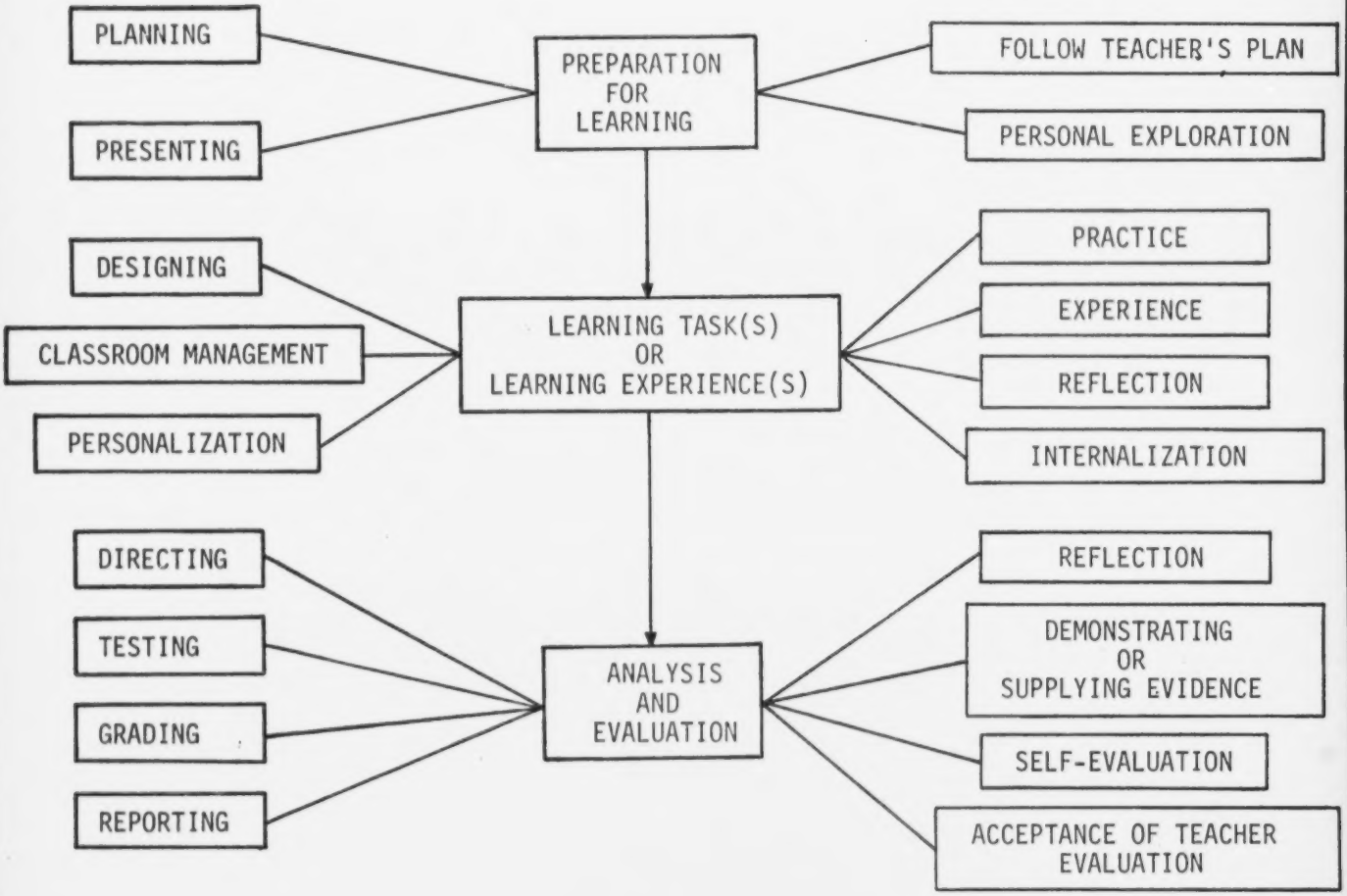
The skills on which we will focus in this course have been selected from those named in Figure 2. Within the limitations of time and leadership personnel we shall consider skills needed for (1) planning learning experiences, (2) presenting learning experiences, and (3) evaluation of learning.

It will be apparent as soon as you have read the inventory of skills (Table I, below) needed to carry out your responsibility as a teacher that we cannot go into all of these in depth in a limited time. Each skill could, in fact, be the focus of extended study.

TABLE 1. Inventory of Skills Needed to Carry Out Selected Teacher Responsibilities

Responsibilities	Skills Needed
Planning Learning Experiences	Stating Objectives Developing curricula, courses, and learning experiences Designing and selecting learning materials
Presenting Learning Experiences	Lecturing
Classroom Management	Leading discussions of various types Directing group activities
Personalizing Learning	Helping learner to identify learning needs Responding to individual interests and needs
Evaluation of Learning	Planning demonstrations as evidence of learning Analyzing learner performance and other evidence Helping learner in self-evaluation Testing

FIGURE 2. TEACHER'S AND LEARNER'S ROLE RESPONSIBILITIES



B. LEARNING THEORY AND THE ADULT AS A PART OF THE TEACHING/LEARNING SYSTEM

Does the teacher of a single specialized professional course need to know anything about learning theory? Especially if this teacher is a specialist--and a practitioner--in the content of the course? The answer is definitely No, if one is an intuitive master teacher. There have been such in the field of library science and, undoubtedly, there will be again. Then there are the rest of us. For us, the answer is just as definitely Yes. To incorporate the relevant parts of current learning theory in our own efforts is, at the least, an economy which saves us from re-inventing the wheel (blackboard?) and, at the most, the capability of making our own contributions to the theory. Between these extremes are many advantages to teaching from a base of learning theory.

The study of learning theory could be, and is for some, a life-long scholarly commitment. In this course however, we will approach it selectively from the viewpoint of the question "What can the educational psychologists tell us in practical terms that will help us to teach professional skills to adult learners?"

The first axiom is that adults learn differently than children; its implication is that the methods traditionally used with children do not work equally well with adults. The second contemporary axiom is that adults bring to any learning situation a set of characteristics different from those of other types of students. Many of these characteristics may have either a positive or a negative influence in a given learning situation. To accept these principles is to commit oneself to study the physical, mental and emotional differences between children and adults and to base one's teaching strategies on the findings of research about the characteristics of adults as learners.

Without detailing the specific research, some generalizations will be helpful. In an effort to make this outline most serviceable, adult characteristics will be grouped under physical, mental and emotional traits, though it will be obvious to you that there are numerous overlappings and interrelationships. We are frankly looking at the overall picture here and admitting that we run the risk of obscuring subtleties.

Physical Characteristics of Adults Which Have Important Implications for Teaching

The adult has . . .

a longer attention span than the child.
a declining memory span, especially after about age fifty.
a slower reaction time; normal timing may be adversely affected by psychological pressure.
more physical limitations generally; serious, chronic conditions can severely limit learning capability.

Mental Characteristics of Adults Which Have Important Implications for Teaching

The adult has. . .

- a personal learning style (aural, visual, group, individual) that is well-developed and the ability to describe personal preference.
- ability to see more quickly the relevance (or non-relevance) of present learning to life patterns; ability to apply more quickly what is relevant.
- a more fixed personality, less amenable to change.
- more fixed attitudes, generally, under a greater burden of stereotypes.
- a tendency to reject by forgetting what cannot be incorporated in his or her life patterns.
- greater inability to relate life experiences to present learning.
- more emotional associations with words, situations, people and institutions to assist or interfere with learning.
- ability to learn faster, learn more and to retain learning longer when learning is based on past experience and perceived as relevant to present needs.

Emotional Characteristics of Adults Which Have Important Implications for Teaching

The adult has. . .

- different motivations for learning, motivations that are based in desires to improve economic position, professional status and opportunities for self-actualization.
- great need for socialization with peers during learning (especially if the learner perceives himself or herself as being "alone" in the work situation).

The adult is. . .

- more likely to bring negative feelings about traditional learning to a new learning situation; perhaps hostility to all learning because of underlying resentment of authority.

- more likely to harbor feelings about personal inadequacy and failure; react badly--even become ineffective in the learning situation--under competition, comparative kinds of evaluation, or discipline.

- more likely to see new learning as a threat to the balance and integration achieved in life.

Helping Adults Learn

Research into the motivation of adults who voluntarily undertake new learning experiences implies some strategies for use in in-house training.[1] Allen Tough, then of the Ontario Institute for Studies in Education, showed in 1968 that adults engaged in self-directed study for multiple reasons, most of them pragmatic. Additionally, the majority of those he studied, although they had begun learning projects out of curiosity or puzzlement, continued their learning for other, more pragmatic reasons. A 1980 study by Aslanian and Brickell, although not a replication, reinforced earlier findings by pointing to transitions in an individual's life as powerful pragmatic motivators. Eighty-three percent of the persons interviewed in this study testified to this thesis, with more than half specifically relating their search for new learning to some form of job transition. In fact, much of an entire generation of research went into the question of why adults participate voluntarily in educational activities. This research clearly shows the relationship between anticipation of immediate usefulness (often on-the-job usefulness) and high interest in learning.

A second strong relationship exists, as shown throughout the body of research, between personal satisfaction in the learning activity and interest in participation. This satisfaction may come from the content or nature of the learning, or it may come from social reasons such as meeting new people during training and escaping routine. No matter. Satisfaction draws adults repeatedly to seek learning activities.

Thus we must admit that there is no simple formula for motivating adults to continue learning, either at work or elsewhere. Nevertheless, it does seem that we can select two major ideas from the research and convert them to motivational strategies:

1) make the learning useful, preferably in the immediate future; and
2) make the experience satisfying, both intellectually and socially.

Obviously, the more the teacher knows about individual learners and the group of learners in a specific situation, the better the teacher can plan useful learning and satisfying experiences. Consider the implications of this statement for in-service training--for bibliographic instruction--for graduate library education--for continuing education.

Important implications for teaching adults can be drawn from known characteristics of adult learners. Rules of thumb for teachers might include:

CONSIDER PHYSICAL COMFORT AND NEED.

Allow learners to choose work space close or farther away from blackboards and screens, and from sources of sound.
Alternate periods of intense concentration with more relaxed activities.
Provide handouts and allow taping as alternates to continuous, demanding note-taking.
Provide breaks to "fill coffee cups and empty people."

[1] K. Patricia Cross, Adults as Learners (San Francisco: Jossey-Bass, 1981) Chapter 4, "Why Adults Participate--and Why Not," pp. 81-108. (A review of the research from 1961 to the present.)

MOTIVATE LEARNERS BY PLANNING LEARNING AROUND JOB-RELATED MOTIVES.

Involve learners in the identification of learning needs and objectives.
Show relationship of new skills and information to current jobs.
Stress up-dating, building on past learning. (Be sure to show relationships between the "known" and the "new".)

DRAW ON THE COMBINED KNOWLEDGE WITHIN THE GROUP OF EXPERIENCED ADULTS.

"Panels" or dialogs" are less threatening than individual personal responsibilities.
Try to combine in group activities learners whose experiences supplement or enhance each other rather than those that duplicate.

PROVIDE ALTERNATIVE LEARNING METHODS AND MATERIALS.

Tape lectures so students can re-listen.
Identify (or, if necessary, make) tapes or slides/tapes that parallel reading assignments.
Design personalized instruction in several modes as well as group instruction.

PROVIDE AN ATMOSPHERE THAT IS NON-COMPETITIVE.

Use an evaluation mode that is non-comparative.
If possible, avoid grades.
Consider interview evaluations.
Utilize evaluation forms or memos--anything to avoid a stark, isolated "grade".
Utilize self-evaluation as a necessary adjunct to teacher evaluation.

STRESS PEER RELATIONSHIPS.

Initiate peer "helping" situations.
Organize sharing--but subtly.
Use group projects.

PROVIDE FOR "LISTENING" AND "SOCIALIZING".

Teacher listening to learner can result in input for diagnosis, first aid, and ideas for personalization of information.
Learner listening to learner can result in allaying fears, reinforcing learning, and sharing personal resources for learning.
Coffee breaks, happy hours, retreats, even field trips and lab sessions provide opportunities for needed socializing.

GLOSSARY

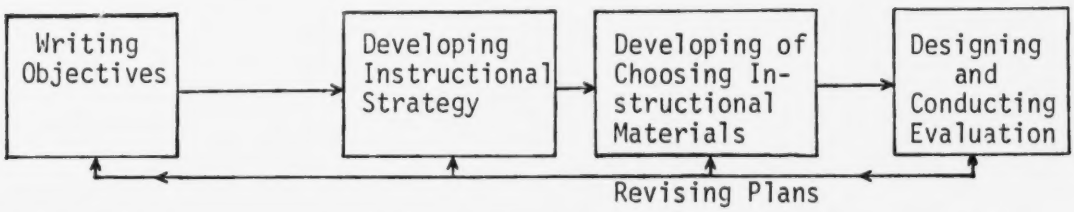
pedagogy:

andragogy:

C. THE NATURE OF PLANNING FOR TEACHING AND LEARNING

Planning, for almost anything, is a series of steps: thinking through, gathering information, studying alternatives, making decisions, postulating hypotheses, making a trial run. For the planning of teaching the process looks something like this:

FIGURE 3. MODEL FOR DESIGNING INSTRUCTION[2]



GLOSSARY

objectives:

instructional strategy:

instructional materials:

evaluation:

---

[2]Adapted from several sources by extrapolating the basics. For detail and subtleties, read the experts: including: Walter Dick and Lou M. Carey, The Systematic Design of Instruction (Tallahassee: Florida State University, 1976); Gagne, Robert M. and Leslie J. Briggs, Principles of Instructional Design (N.Y.: Holt, Rinehart and Winston, 1974); Segall, Ascher J., et al, Systematic Course Design for the Health Fields (N.Y.: John Wiley, 1975).

Actuality is not quite as simple as the model. Two cautions, especially, need to be made. First, the process, though it appears to be straight-forward, is actually a spiral in that each succeeding step needs to be closely aligned with the preceding step(s). Thus the planner is constantly reviewing her/his work in terms of the information and decisions related to earlier steps, and making frequent adjustments in response to fresh insights. The evaluation which ends the planning process is called "formative" because the instruction is still in a stage of formation, not yet finalized. It feeds yet additional information and insight into any or all of the preceding modules, which must then undergo further revision. Only at this point--following the trial run--is the instructional design considered complete. It is, of course, still a design and subject to further change as experience grows with classroom use.

The second caution is that each module in the model requires a series of sub-steps, some of which can be quite time-consuming depending on the availability of needed information and materials and the complexity of the decision-making required.

For example, before objectives can be written the planner needs answers to a series of questions:

> What are the overall goals toward the achievement of which this instruction is aimed? Is one goal "to inform" only, allowing the learner to find ways to apply the information in any one of several situations? Are the situations knowable in advance of the teaching?
>
> Or does the goal relate to producing a worker who can carry out certain tasks, using a certain body of information? Is the information used, on the job, as part of a skilled process? Does the learner already possess the skills or are they to be learned during the same instructional activity, along with the information?
>
> Or does the goal relate to attitudes? Who decides what these attitudes are to be? Are they extensions of attitudes already existing in the intended learners, or are they new attitudes which must be introduced and which the teaching/learning activity must help the learners to accept? Will the new attitudes be congenial to the intended learners, or will they be restricted?

Goals (including those which encompass learning objectives) are usually prescribed--by one's organization, by the profession, or by some other recognized authority. The planner accepts these goals, interprets them by gaining answers to the above (and possibly other) questions. The planner then uses all this information to set the bounds within which specific learning objectives are defined.

Similarly, each of the other modules in the model for designing instruction comprises a series of steps. The remainder and major part of this course consists of a detailed look at the work involved in each of the four modules that constitute this planning process.

QUESTIONS FOR THOUGHT

How have you participated in teaching/learning systems in the past? How do you want to be involved in the future? Will your responsibilities change? Why, and how? Or, why not?

From your own experience do you agree with psychologists about the importance of socialization during learning? Can you list some "pay-offs" you've experienced or observed?

Why has the rather awkward term "learning activity" come into widespread use, expecially in talking about continuing education?

Is there any real advantage in talking about "planning" for teaching and learning? Or is this just educational jargon? If you know your subject, can't you just get in there and talk about it?

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PART II. STEPS IN PLANNING AND IMPLEMENTING TEACHING/LEARNING

A. IDENTIFYING INSTRUCTIONAL OBJECTIVES

"GOALS" AND "OBJECTIVES"

Both of these terms are used in the literature of general education and in the literature of library education, often without differentiating between them. Webster's Collegiate Dictionary offers the following help:

goal: "end toward which effort is directed; aim"

objective: "something toward which effort is directed: an aim or end of action"

Obviously, library literature is not the only place where there's confusion.

Usage and some educational philosophers suggest that it is helpful to limit "goal" to long-range or highflown aims, and to prefer "objective" for aims which are immediate and specific. Thus our goal in medical library education might be phrased: To produce competent medical librarians. Or the goal of library education, in general, might be stated: To produce competent librarians.

Objectives, being related to aims that are both immediate and specific, need to be much more limited in scope and capable of more immediate achievement. Objectives, in contemporary educational usage, are stated in one or both of two ways: (1) for an entire educational activity, such as a course or a workshop; (2) unit-by-unit of a specific activity.

Goals, especially those related to library instruction, are usually handed to us, as teachers, by our professional associations (as in continuing education) or by our parent institutions (as in bibliographic instruction, in-service training or graduate library education). In the best situations those who will do the teaching are involved in the process of formulating the goals, at least through representation of teaching points of view.

TABLE II. Examples of Goals That Require Teaching/Learning Activities for Fulfillment

Bibliographic instruction:	To make health care personnel knowledgeable users of libraries
In-service training:	To instill service attitudes in library technical assistants
Continuing education:	To constantly upgrade members of an association in relation to utilization of computers in libraries

Such statements of goals (as in Table II) usually occur in a library's "mission statement," or statement of assigned responsibilities, or in stated long or short term "objectives"; or they might be included in the statements of purpose, members' services or "objectives of a professional organization." (Remember the confusion in the use of the words "goals" and "objectives.")

TRANSLATING LIBRARY GOALS INTO EDUCATION TASKS, OR--WHAT ARE WE TRYING TO DO?

In order to implement goals, it is necessary first to set appropriate objectives related to them. These library objectives should be short term, and they should describe the performance, work or condition that contributes to reaching the goal. Since library administrators and funding authorities will want to know, from time to time, how the library is progressing toward its goals, each stated objective should be capable of evaluation, in terms of whether or not it has been accomplished, in a tangible way, usually by measurement or quantification.

Library objectives must eventually be stated in work terms so that administrators and supervisors can direct their accomplishment. Many kinds of work are required to accomplish a full set of library objectives. We are concerned here only with those that require educational tasks for their fulfillment. The individual responsible for those objectives must study them carefully, in terms of the educational tasks they comprise.

Education--in libraries and in library schools--revolves around three kinds of tasks. These tasks relate directly to the major kinds of learning: cognitive, affective and psychomotor.

GLOSSARY

cognitive learning: information, transferred from a source to a learner

affective learning: feelings, attitudes, emotions, some planned as part of the learning and some unplanned, sometimes involving the use of information

psychomotor learning: muscular action coordinated with mental processes and/or information

Based on these kinds of needed learning, the major education tasks that face us in librarianship are:

... transferring information from a source to a learner (a cognitive task for the teacher)

... fostering the development of skills for library work or library use, including the application of information, sometimes as part of a manual job (an intellectual and psychomotor skill task for the teacher, complicated by the learner's need for information and the

ability to use it, sometimes along with muscular action, as part of the skill)

... instilling or changing attitudes related to libraries, work, or communication (an attitude development or affective task for the teacher, complicated by its relation to both information and the previous experience or mind set of the learner)

TABLE III. Example of a Library Goal Analyzed to Identify its Educational Tasks

Library Goal:	To operate the library efficiently
One Related Objective:	To substitute a library technical assistant's time (and salary) for that of a degree librarian in routine interlibrary loan work
Educational Tasks:	
Information Task:	To transfer information about ILL and its processes (a cognitive task)
Skill Task:	To train LTA's to use selected bibliographies and directories (a psychomotor and cognitive task)
Attitude Task:	To develop in LTA's positive attitudes toward the accuracy needed in ILL work (an affective task with cognitive components)

SUMMARY

The educational task that faces us in a given situation may embrace one, two or all three kinds of learning--cognitive, affective, psychomotor. Each requires somewhat different methodology for effective learning, as we shall see. It is therefore essential that we analyze each situation to determine what we are trying to do. The basic questions for this analysis are:

Does the learner simply need new information or does she/he also need to use that information in some way?

Can the learner use the new information with existing skills or does she/he need to be taught new skills along with the information?

Is the learner expected to display new attitudes? Do these attitudes accompany the use of new information or new skills?

Frequently, for adults, learning new work routines includes unlearning others. The education required for such learning is often described as being "behaviorally oriented," even though large amounts of information must be incorporated in the newly specified performance. This is a major kind of education required for library staff in-service training and continuing education; it even constitutes a large part of the graduate library school instruction. The same kind of education--aimed at instilling new patterns of behavior--is used in bibliographic and library use instruction.

Therefore, the objectives stated for in-service training, continuing education activities, bibliographic instruction, even graduate library school courses, are best stated in terms of the learner's (new) behavior as desired at the end of the learning activities. Such statements are called "behavioral objectives" in the world of teaching. In the work-world, where both workers and libraries are increasingly being evaluated by the study of individual and group performance, the term "performance objective" is obviously closely related.

Statements of behavioral objectives have great potential value because they serve several purposes. They

... inform teachers, administrators and others exactly what we are trying to do in our education activities,

... provide a rational basis for choosing teaching/learning methods and materials,

... state intended educational outcomes in terms that can be measured or observed,

... tell learners in advance what they can expect to learn for their investment of time and money, and

... tell learners how they will be expected to perform when they are being evaluated.

Thus by describing the intended outcome of your instruction, you have a beginning point for your instruction which conveys your intention to all concerned. Notice, however, that these outcomes cannot be stated, nor objectives written, until you have completed the analysis of your goals and determined just what educational tasks must be addressed, analyzed the work tasks to be taught, identified the learners' entry behavior and stated the conditions under which each learner will be required to demonstrate that he/she has learned.

Only then are you ready to write behavioral objectives.

QUESTION FOR THOUGHT

Does your observation as a learner or as a teacher verify the assertions of values related to the use of behavioral objectives? If not, how does your observation differ? What do you substitute for behavioral objectives?

B. WRITING BEHAVIORAL OBJECTIVES

Background

The concept of "behavioral objectives", which appeared in the literature of professional education in the 1960's, was based on the work of two educational psychologists: Benjamin Bloom, who stressed the cognitive, or intellectual , aspects of education;[1] and David Krathwohl, who concentrated on the affective, or emotional side of learning.[2]

From the seminal work of these researchers, and others, educators came to believe that in order for educational activities to be effective, both cognitive and affective aspects of learning must be provided for, and that specific objectives related to both must be stated for learning activities.[3] Writing behavioral objectives is easier said than done, however, especially in a field like library science, which has always stated its objectives in broad, general terms, i.e., as goals.

It is especially important in library in-service training that objectives be stated in clear, behavioral terms, if at all possible. The goal of in-service training is to prepare individuals to perform specific jobs, usually ones to which they are currently assigned or to which they may be promoted, if eligible. It is essential for these people to know what they have to do at work and in order to gain the benefits available in their work situations.

The goals of continuing health science library education are also closely related to job performance and benefits. Success or failure of the teaching/learning in these educational situations thus has significance for workers. Because of the expense of the CE educational effort and the importance of the outcomes, it is only fair to all concerned to state clearly what can be expected as outcomes of the teaching/learning activity (i.e., the immediate objectives).

Similarly, the success or failure of the teaching/learning offered as educational services by libraries to their clients is closely related to benefits--job and professional benefits for researchers and practitioners in every discipline. Again, because of the expense of library use instruction and bibliographic instruction, and because of the significance of this instruction to the professional workers who are the library's patrons it is important to let them know, through behavioral objectives, how the instruction will be useful in their daily activities.

Definitions

The accepted definition of behavioral objectives incorporates the concept of demonstration of achievement:

> Behavioral objectives: "The aims or objectives of education, stated as actual performance criteria, or as observable descriptions of measureable behavior."[4]

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[1]Benjamin S. Bloom, et al., A Taxonomy of Educational Objectives. Handbook I. Cognitive Domain (N.Y.: David McKay, 1956).

[2]David Krathwohl, et al., A Taxonomy of Educational Objectives. Handbook II. Affective Domain (N.Y.: David McKay, 1964).

It was this definition of behavioral objectives that led to the concept embodied in the now frequently encountered phrase "competency-based education." In view of the emphasis on this concept in health science education at the present time, one more definition is in order:

> Competencies (for specific jobs): "Those concepts, skills and attitudes which are highly specialized and relate directly to (a) the single job classification in which the student-learner is interested and (b) the specific requirements of the student-learner's training station position."[5]

TRANSLATING EDUCATIONAL TASKS INTO BEHAVIORAL OBJECTIVES: GATHERING INFORMATION

Writing behavioral objectives is one of those jobs which requires a couple of other jobs to be done first. Like reference work. Before you can find the answer, you have to find the book with the answer! How many times do you know the exact book needed to answer the question asked, but you can't recall either its author or exact title or a near-enough call number to put your hands on it?

First you have to identify the book some way other than by author or title in your "finding tool." Then you can find the book on the shelf and the answer in the book. In order to write behavioral objectives, first you have to gather two kinds of information, then you write the objectives.

The first kind of information you need can be obtained from reading procedure manuals or by watching a skilled person do the job that is to be taught. This is a task analysis.

The task of carrying out an ILL transaction consists of the following procedure:

1. Read patron's request form.
2. Ask for interpretation of abbreviations and for missing bibliographic data.
3. Choose an appropriate bibliography in which to verify the given citation.
4. Locate the citation in the chosen bibliography.
5. Interpret the citation.
6. Compare the citation with the given.
7. Resolve conflicts; complete information from additional bibliographies, if needed.

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[3]Robert F. Mager, Preparing Instructional Objectives (2nd ed.; Belmont, California: Fearon Publishers, 1975). The best manual available for learning how to do it. If you have read it, or if you can get a copy now and read it, skip this section!

[4]Carter V. Good, Dictionary of Education (2nd ed; N.Y.: McGraw-Hill, 1959).

[5]Ibid.

8. Choose an appropriate library to which to address request.
9. Complete ILL form.
10. Stuff copies of form to be forwarded into window envelope, or address envelope and stuff.
11. Place envelope in library's outgoing mail.
12. File library's record of request.

There may be minor variations in different libraries (e.g., verify in more than one source), but basically, that's it.

The task analysis has answered the question "What steps, exactly, have to be done--and in what order--to carry out an interlibrary loan transaction?" The outcome of the instruction, to be embodied in our behavioral objectives, is the ability on the part of the learner to carry out each step in the task.

The second kind of information you need answers the questions "Which of the sub-tasks can the learner already perform? Which bits of needed information does the learner already have?" The answers depend in a given situation on the skills required for hiring and what the worker has learned on the job prior to the present teaching. Prior skills and prior knowledge are designated "entry behaviors."

Now--in preparation for writing specific behavioral objectives for a given teaching/learning situation--we can designate the sub-sets of the information and skills that we assume or know the learner already possesses.

Back to our library technicians who are to learn the ILL task. Asterisks designate entry behavior. These might differ from library to library depending on just what tasks the LTA has already been doing and on what skills the job description required.

*1. Read patron's request form.
*2. Ask for interpretation of abbreviations and for missing bibliographic data.
3. Choose an appropriate bibliography in which to verify the given citation.
*4. Locate the citation in the chosen bibliography.
5. Interpret the citation.
6. Compare the citation with that given.
7. Resolve conflicts: complete information from additional bibliographies, if needed.
8. Choose an appropriate library to which to address request
9. Complete ILL form.
*10. Stuff copies of form to be forwarded into window envelope, or address envelope and stuff.
*11. Place envelope in library's outgoing mail.
12. File library's record of request.

Notice that in the analysis of the task the activities are stated in the order in which they are to be carried out.

Notice that the second version above incorporates both task analysis and entry behavior.

Notice that if you have a well-defined procedure manual, carefully worded job descriptions with stated qualifications, and a structured in-service training program in your library, this information gathering step in preparing to write behavioral objectives will already have been done for you!

Translating Educational Tasks into Behavioral Objectives: Defining Performance

Now that we know from our analysis what kinds of tasks we as teachers have in order to help achieve the library objective in our example, and now that we have a task analysis and know the entry behavior of our learners, we are in a position to describe the performance that will be taken as evidence of learning.

Note that some of the steps in the task analysis (above) are action steps: "read," "ask," "file". Other steps require the mental use of information to make judgements; "interpret," "compare." Still others are combinations: "choose an appropriate..."

The more aspects of performance we can specify in action terms (i.e., as behaviors) the better the objectives will be for learners. Action word objectives tell learners what they are to do and adult learners quickly determine how they personally can best learn to do what is specified. Action word objectives also make it easy to determine that the objectives have been met. Evaluation is done by observing the action (or performance).

When the task requires the mental use of information to make judgements, the correct completion of the task (i.e., the observable action) is taken as evidence that the information has been learned.

Table IV shows the educational tasks of our example and their related behavioral objectives.

Translating Education Tasks into Behavioral Objectives: Specifying Outcomes

Now that we have defined the kind of performance we expect we are in a position to determine how we will know when it has been accomplished--when our LTA's have learned.

Obviously, you say, we will know we've accomplished our objectives when the library's LTA's are carrying out all routine ILL's with a high degree of accuracy. Yes, but exactly how will we know that point has been reached. Let's list some criterias in preliminary form:

1. LTA's will be able to interpret bibliographic citations for recent monographs, serials and documents accurately.

2. LTA's will be able to verify given citations to recent monographs, serials and documents in appropriate bibliographic sources.

TABLE IV. EXAMPLES OF EDUCATIONAL TASKS AND RELATED BEHAVIORAL OBJECTIVES

EDUCATIONAL TASKS	BEHAVIORAL OBJECTIVES
The teacher's task is to:	At the conclusion of the instruction, the learner should be able to:
develop LTA's who can substitute for degree librarians in certain routine ILL transactions	interpret bibliographic citations for recent monographs, serials and documents accurately
	verify assigned citations in appropriate bibliographic sources
	choose an appropriate library from which to request assigned ILL
	complete standard ILL forms correctly
	enter all required information into library's ILL records correctly
instill positive attitude toward accuracy in ILL work	monitor own work and achieve a consistently high level of accuracy

3. LTA's will be able to choose an appropriate library from which to request assigned ILL.

4. LTA's will be able to complete a standard ILL form and all internal records of an ILL transaction correctly.

Remember that more and more libraries are required to measure the work they do, for amount and/or quality, as part of their overall accountability evaluation. This is harder to do for some library tasks than for others. For ILL it is relatively easy in terms of time and accuracy. To let the learner know exactly what our accountability criteria are, we would add them to the statements of objectives:

1. LTA's will be able to interpret bibliographic citations for recent monographs, serials and documents in no more than one minute each, interpreting 99 of every 100 citations with complete accuracy.

   It may be necessary to explain the specific meaning of "interpret." It means:

... distinguishing whether a given citation refers to a monograph, serial or document

... labelling each bit of data in the citation: author, title, volume, etc.

... stating which significant data bits are missing or that the citation is incomplete

... identifying access data for use in verifying or in completing ILL form

2. LTA's will be able to verify given citations to recent monographs, serials and documents in appropriate bibliographic sources, in no more than ten minutes per citation, verifying 95 of every 100 citations with complete accuracy.

   It is necessary to expain the meaning of "verify" and "appropriate." Verify means:

   ... comparing data bit by data bit the given citation and a citation for the same item in a bibliographic source

   ... completing or correcting the given citation as needed

   ... resolving discrepancies between the given citation and the sources in a way specified in the procedure manual (using an additional source; referring to supervisor)

   Appropriate bibliography means one or more of those specified in the procedure manual.

Including the criteria for evaluation of the learning is especially helpful to learners and in situations where accountability evaluations are required. It is not always possible in such concrete terms as in the above example, and the effort to do so is filled with questions of what, in performance terms, is evidence of learning.

Translating Educational Tasks into Behavioral Objectives: Identifying Conditions of Performance Evaluation

It is also very helpful to adult learners to know exactly what conditions will prevail when they are demonstrating their learning. For example, in an academic classroom students are usually asked to show what they have learned in a test situation, which means without assistance unless the test is designated "open book." In libraries, workers are usually urged to "check the procedure manual" if they are in any doubt about basic steps in performing tasks. Therefore, in in-service education, consulting the procedure manual is a reasonable condition of performance. The same would be true of other reference tools normally used during work procedures.

In our example, we might include this condition in behavioral objectives 2 and 3:

2. Given access to the library's standard bibliographic tools...

or

Using Medical Books in Print, NLM Current Catalog, Index Medicus and MEDOC, ...

...LTA's will be able to verify given citations to recent monographs, serials and documents in no more than ten minutes per citation, verifying 95 of every 100 citations with complete accuracy.

3. Given a union catalog (or list), and/or a list of lending libraries with which the library has ILL agreements, LTA's will be able to choose an appropriate library from which to request assigned ILL s, using no more than five minutes per loan and making a correct choice 99 of every 100 loans.

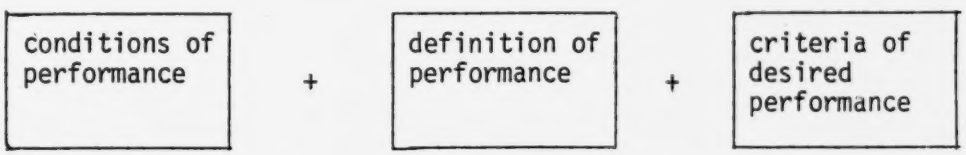
Another way to accomplish the purpose of letting LTA's know the conditions under which their performance is to be evaluated is to add a statement at the end of the behavioral objectives:

These tasks will be carried out using the bibliographies and directories named in the procedure manual, and using the manual itself. As a final test of the learner's ability, (a given number of) citations will be assigned and the LTA's work will be observed, timed and completely checked for errors.

The process of analyzing an educational task, determining the steps of a work task, identifying entry behaviors,defining performance required, specifying outcomes and identifying performance conditions thus results in a three part formula for behavioral objectives.

The Formula

The formula for writing behavioral objectives, insofar as there is one, is a simple three part statement:



Let's look at the parts of the formula separately.

Conditions of performance means the conditions under which the demonstration of learning will take place. When writing behavioral objectives for in-service training, it is not necessary to state that it will be done in the library. This can be safely assumed. It may be important, however, since the demonstration of learning will take place as part of job performance, to specify whether the demonstration will be from memory or with assistance from a procedure manual or reference tools:

> Using the card catalog or literature guides for access, the LTA will be able to locate a definition for a technical word in any discipline served by the library . . .

In much of the continuing education and graduate library education the same assumption (that the work will be done in a library) can be made. However, since special test conditions are frequently imposed in the formal academic world ("from memory," "without assistance from sources") and these are different from work conditions, each objective written for academic use should be scrutinized with this distinction in mind. Honesty about test conditions is essential. It may be necessary to make separate statements about later, on-the-job use of the information and skills taught in library schools.

> Using the course text (for a course on drug reference sources) to identify the most-likely source, the learner will be able to provide U.S. brand names for any U.S. generic drug names, or the U.S. generic drug name for any U.S. brand name . . . (for a CE course)
>
> Without assistance from sources, the student will be able to name the tool-of-choice for ready reference questions in the following categories: dictionary questions, directory questions, chemical formulas . . . (for a graduate library school course in health science reference literature)

Library use instruction obviously applies to each learner's activities in libraries. Bibliographic instruction, however, has a broader focus since its aim is usually to develop subject specialists into independent users of their own literature whether they use it in libraries or in their own work and study places.

> Using the library's access tools, the learner will be able to identify a subject dictionary and locate it on the shelf . . .
>
> Using a bibliography of in-print medical books, the learner will be able to locate current publication information about selected kinds of printed materials published commercially in his/her own discipline: a dictionary, a monograph, proceedings of a conference . . .

Reading the conditions (underlined) in the examples above, one of the big advantages of stating them becomes obvious: they are a significant help when it comes to planning the determination of what (or whether) learning has taken place. In fact, that is their purpose: to help both instructor and learner know the kind of demonstration of learning that is appropriate. It should be equally obvious that the statement of conditions is in the nature of a contract. One does not promise one kind of demonstration of learning, then demand a different one of learners.

Definition of performance means the action which constitutes the performance:

. . . locate a definition
. . . identify the most likely source
. . . identify and locate a subject dictionary
. . . locate current publication information

The action statement is the heart of the behavioral objective. Conditions may sometimes be safely assumed and criteria of acceptable performance may not be available, but without the definition of the action which constitutes the desired performance there is no behavioral objective.

Mental "action," which includes many of the bibliographic, planning and judgment tasks librarians perform, are not directly observable. The action words which might describe these tasks ("compare," "prioritize," "select") do not meet the requirement of the definition of behavioral objective--"observable descriptions of measurable behavior." When determining whether or not learning has taken place, the instructor is dependent on the product of the action (e.g., the verified citation, the sequence of carrying out tasks, the book selected). Achieving an accurate, correct or wise product is taken as indication that learning has, indeed, taken place. Sometimes it is possible, and always desirable, to indicate in the objective what the acceptable indication of the learned behavior will be.

. . . differentiate between in-print and out-of-print books
. . . carry out the procedure for . . .
. . . access the data base

Remember that the performance (action) stated must be that desired of the learner at the conclusion of the teaching/learning activity.

Criteria of performance means the specification of limits of performance required before we as instructors are willing to say to learners, "O.K., you've got it." Where performance in a workplace is the anticipated outcome of the instruction, the limits of desired performance are often those of time, quantity and/or quality.

. . . in no more than thirty minutes per monograph
. . . getting 99 of 100 correct
. . . according to AACR II rules

Few tasks in libraries have standards about the limits of desired, or even acceptable, performance. Those which do are usually relying on local standards. Their use in behavioral objectives would apply only to local in-service instruction.

Further, many tasks require considerable practice before the learner can demonstrate a "professional" level of competence; neither library school courses nor continuing education activities have that much time available. For these reasons, few objectives encountered in graduate education, continuing education or in-service training are accompanied by criteria of performance. Those that do exist are subject to challenge by instructors outside the institution which uses them.

The situation may be changing. There are forces at work in librarianship that may bring about greater standardization of performance expectations. Instructors should keep an eye on the trend. The best advice is: if performance criteria are available, include them in your behavioral objectives. If none are generally accepted, justify your own or don't worry about their absence from your behavioral objectives.

Expressive Objectives

It has been noted for some time by educators outside the field of librarianship, as well as by some within, that a considerable number of "practitioner" tasks are impossible to describe in the prescriptive terms of behavioral objectives.[6] This group includes those tasks which are by their nature complex mixtures of intellectual and communication skills (e.g., problem-solving), those which cannot be circumscribed by simple limits of time, quantity or quality (e.g., budget-making), and those which require maturity of judgment but can be evaluated for their rate of success only over time (e.g., supervising employees).

Many of these tasks draw on the performer's life skills as much or more than they draw on the teaching or learning of a given point in time. Study of principles, analysis of cases, growth in understanding may be relevant, even appropriate in preparing for certain kinds of tasks. However, since life skills, extensive practice of new behaviors, and maturation are part and parcel of successful performance, prescriptions of performance stated as behavioral objectives simply are not possible.

The effort of educational specialists to deal with the problem of stating objectives in relation to these kinds of tasks has resulted in the concept of expressive objectives.

> "An expressive objective does not specify the behavior the student is to acquire after having engaged in one or more learning activities. An expressive objective describes an educational encounter: It identifies a situation in which learners are to work, a problem with which they are to cope, a task in which they are to engage; but it does not specify what from that encounter, situation, problem or task they are to learn. An expressive objective provides both the teacher

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[6] George J. Posner and Kenneth A. Strike, "Ideology versus Technology: The Bias of Behavioral Objectives," Educational Technology 15:5 (May 1975), 28-34. There are many other such articles in the literature of professional educators.

and the student with an invitation to explore, defer, or focus on issues that are of peculiar interest or import to the inquirer. An expressive objective is evocative rather than prescriptive."

"The expressive objective is intended to serve as a theme around which skills and understandings learned earlier can be brought to bear, but through which those skills and understandings can be expanded, elaborated and made idiosyncratic. With an expressive objective what is desired is not homogeneity of response among students but diversity."[7]

Look at the statement of objectives for this course (preliminary page). Notice that some objectives, labelled "Cognitive," speak to the information contained in the course-text and in lectures. Notice also that for some of the objectives there is a corollary skill related to the use of the information in teaching--the ultimate goal. The objectives promise, however, only that the learner will be able to use the information in typical classroom ways: "describe," recognize," "differentiate," "summarize." That is, these behavioral objectives describe academic behavior typically accepted as evidence of learning. There is no promise that, as a result of the course, the learner can carry out the complex combination of skills that comprise "teaching."

Other objectives for this course are labelled "Experiential." The situation in which this teaching/learning will take place is described ("During the course students will be able to participate in and respond to . . ."). Then four expressive objectives are stated. Each is evocative and will be fulfilled to a greater or lesser degree depending on what each learner brings to the teaching/learning situation, how each learner feels about what happens during demonstrations, and each learner's attitudes about his or her own performance as a teacher.

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[7] Elliot W. Eisner, "Instructional and Expressive Educational Objectives: Their Formulation and Use in Curriculum," in James E. Popham, et al., Instructional Objectives (Chicago: Rand, McNally, 1969), 14-18. (Emphasis mine.)

Behavioral Objectives: Exercise 1

Instructions: Analyze each of the following statements to answer these questions:

	Is this a behavioral objective? Y	N	If Y, identify its conditions, action word, criteria by circling and labelling. If N, explain why it is not a behavioral objective
1. To understand inter-library loan procedures			
2. To relate to others in a demonstration of interpersonal communication			
3. Given a file of citations (as reserve requests) LTA will be able to sort the citations into "monographs" and "serials" with complete accuracy			
4. Be able to state from memory the library's policy regarding renewals of monographs, bound and unbound periodicals and media software			
5. Given a model of a multitype library network, to appreciate the values of library cooperation			
6. To demonstrate a thorough comprehension of budgeting			
7. To take the minutes of a committee meeting to the satisfaction of the committee members			

	Is this a behavioral objective?		If Y, identify its conditions, action word, criteria by circling and labelling. If N, explain why it is not a behavioral objective
	Y	N	
8. To take the minutes of a committee meeting according to criteria in Robert's Rules of Order			
9. To know the difference between open-ended and closed questions in the negotiation of reference questions			
10. Given a copy of the Bunge model of reference process, the student will be able to explain it in an essay			
11. Given a copy of the Bunge model of reference process, the student will be able to locate answers to sample questions in the lab collection			
12. Given that the student has had laboratory experience in using AACR II rules, s/he will be able to apply them to health science media			
13. To teach a one-hour segment of Bibliographic Instruction			

	Is this a behavioral Objective? Y	N	If Y, identify its conditions, action word, criteria by circling and labelling. If N, explain why it is not a behavioral objective
14. Given a matching test on typical ready reference tools, the student will achieve a score of 80 of 100 correct			
15. Given the use of the library's access tools, the learner will be able to select and type a 5-8 item reading list of current year articles or reviews on any topic included in the library's scope, using CBE format, in no more than 30 minutes			

Behavioral Objectives: Exercise 2

Instructions: Following is a list of instructional intentions and library goals (which require at least some educational activity to reach). Write one behavioral objective for each. Note: You may have to choose some part of the intention or goal to address as each, to be fulfilled completely, might require a list of objectives.

1. Convert technical services departments to the use of OCLC _____

2. Teach department heads to use institution's PPBS forms _____

3. Implement recently signed consortium agreement _____

4. Improve clerical circulation staff interactions with patrons _____

PLEASE DO THESE EXERCISES IN ADVANCE. We may talk about them in class, but there will not be time to work on them.

C. DEVELOPING INSTRUCTIONAL STRATEGY

With objectives in hand, one is ready to begin the second step in the process of designing instruction: developing instructional strategy. (Refer to Figure 3, p. 10 to get the perspective.) Now the planner's task is to choose among the available methods the one--or more likely the combination--that will effectively do the job. That is, from the what, the planner moves to the how.

Answers to two important questions must be available to the planner before a choice of method can be made. First, what is the nature of the anticipated learning? Knowledge? Skill? Attitude? A combination? Answers to these questions come from the previous analysis of the learning tasks and are embodied in the stated objectives. Second, what is the size of the learning group? The answer comes from the planner's knowledge of the circumstances under which the teaching will be carried out.

Figure 4, Planner's Guide to Teaching Methods (pp. 36-37) presents an analysis of the most commonly used methods recommended for teaching adults. Figure 5 (p.40) relates these methods to various sized groups and to the teaching of individual learners.

A special word should be said, before you study these figures, about the use of audiovisual media.

Audiovisual materials, popularly known as "media", can supplement virtually any method of teaching, and can do so effectively. As supplements they are often used to provide or enhance routine instructional needs: a multi-dimensional introduction to a topic or unit of study; learner interest or motivation stimulator, often by showing how the new information or skill will be used in library tasks; close-up illustration of a process, or piece of equipment used in performing a task; reinforcement by vivid repetition or summary; enrichment, going beyond the limits of the capability of another method to portray.

Used as supplements only, however, media do not make the full contribution to learning of which they are capable. In both group learning and individualized learning media can provide specificity in relation to objectives, adaptability in relation to learners' needs, and flexibility in relation to instructional needs. Integrated into individualized instruction, media can also provide participation activities and immediate feedback.[8]

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[8] Jerrold E. Kemp, Planning and Producing Audiovisual Materials (4th ed; N.Y.: Harper & Row, 1980), see pp. 3-17 for an excellent introduction to and rationale for the use of media.

FIGURE 4. PLANNER'S GUIDE TO TEACHING METHODS

PRESENTATION FORMAT	LEARNING OBJECTIVE	PARTICIPANTS' RESPONSE	TIME TO PREPARE	SKILLS	DRAWBACKS	ADVANTAGES
I. TRANSFER OF INFORMATION						
Lecture	Explore concepts Summarize/Synthesize Present a point of view	Passive Question & answer sessions allow for some explanation & exploration	To prepare lecture To select & contact speaker To engage speaker for each presentation or videotape	Ability to find appropriate speaker Ability to lecture well	Little group interaction Hard to measure impact on audience Very dependent on skill of speaker	"Name" speaker will attract an audience Speech can be tailored to fit workshop or course
Panel	Present diverse views Provoke discussion	Generally passive but a good panel can stimulate later dicussion or activity	To select & brief speakers To select or act as moderator	Ability to find good speakers who represent different views & will	Major problem: too often panelists give speeches rather than debate an issue Requires strong moderator Hard to follow-up	If well done, can have strong impact on group & cover a good deal of information
Symposium	Explore all aspects of a topic Provoke discussion	Passive Q & A sessions allow for further explanation & exploration	Same as above	Same as above	Speakers may speak too long and make the symposium much too long Requires strong moderator Hard to follow-up	Provides information on several aspects of a topic with variety of presentation
Dialogue	Present two views of topic Add variety	Generally passive but gives a feeling of participation Can lead into discussion	Same as above	Same as above	Difficult to find two speakers who can really dialogue rather than give two separate speeches	Adds informality to the lecture format
Programmed Instruction (manual or computerized)	Present information in exactly the same way to a number of individuals working alone	Interactive, but mechanical	To prepare the program(s) To test	Ability to write in stylized format	Gets negative affective response from many learners Can be hard to follow-up with group	Immediate feedback for learners Easy to measure immediate learning

APPROPRIATE MEDIA FOR TRANSFER OF INFORMATION: slides, transparencies, film, videotape, audiotape

II. DEVELOPMENT OF SKILLS & ATTITUDES (Those marked * are especially attitude building)

SMALL GROUP STRUCTURE	LEARNING OBJECTIVE	PARTICIPANTS' RESPONSE	TIME TO PREPARE	SKILLS	DRAWBACKS	ADVANTAGES
Demonstration	Illustrate procedures Illustrate application of information to tasks	Some interaction through Q & A; more if hands-on experience is added in a lab setting	To analyze the task to be demonstrated To prepare the demonstration	Organization of material; pacing; adapting demo. to size of group	Good step-by-step directions hard to develop; timing may be off; group size	Effective method for teaching application of information to tasks and for teaching procedures
Brainstorming	Think "alternatives" Involve group	Highly interactive	Sufficient time for group to respond Group may have to be trained to use this method	Encouraging group response; Summarizing discussion	Lack of structure may result in no workable solutions	Intense group participation Quick and easy way to involve people in discussion
Case Studies	Problem analysis Decision making	Analytical Involvement	To design study cases takes a great deal of time Needs to be based on research	Writing leading discussions	Group analysis takes a long time Individualized feedback omits sharing ideas	Can be used individually or in groups Lots of information can be presented economically
*Simulation: Game	Experience real situation Simulate steps of problem solving	High level of interaction	Need to allow a good deal of time to design & test game Class time to play is variable Must be based on research	Ability to design, to facilitate group work, to manage the exercise, to debrief	Requires skilled leader May need extra staff to assist	High level of group involvement Enjoyable experience for participants Immediate feedback on skills & Decisions
*Simulation: Roleplay	Demonstrate problem Facilitate interpersonal skills	Very interactive for players; Stimulates discussion	To design roleplay Need to be based on research Class time to play is variable	Designing roleplay Managing the experience Debriefing	Threatening to some people Requires skilled leader	Very effective for demonstrating problems Showing people how they act in certain situations Trying solutions
*Simulation: In-Basket Exercise	Problem solving Good tension-breaker	Full involvement Interactive if used in group	To design exercise & debrief group Needs to be based on record	To analyze problem; construct exercise around it Managing Debriefing	Inability of some participants to see there is no "right" answer Group analysis takes time	Effective means of involving participants in group work No threat to beginners
*Simulation: Action Maze	Practice decision making	Analytical involvement followed by interaction	May take long time to design; classroom time easy to control	Designing Managing Debriefing	None noticeable	High level of personal involvement Non-threatening Immediate feedback
Lab	Practice skills	Active	Variable for different students May take time to design and assemble	Analyzing skill Designing exercises Giving (or managing) feedback	One-on-one takes long time If not one-on-one doesn't meet objective May be hard to make meaningful	Practice time built into class Immediate feedback

APPROPRIATE MEDIA FOR DEVELOPMENT OF SKILLS: slides, film, transparencies, videotape

In many instructional situations the question arises, "Shall commercial or locally produced media be used?" The most cost-effective answer is, usually, "a combination." In library science, however, we often do not have a choice; local production is our only option. Although this course does not encompass enough time to teach production methods, it should be pointed out that the same planning process here being advocated for all instruction (i.e., Figure 3, p. 10) also applies to the production of supplementary media and integrated instructional programs. The bibliography (p. 55) suggests several standard production textbooks.

Simulation Methods

Simulation methods of teaching/learning are less well-known than other methods listed in Figure 4, but are well-adapted to use with adults. Their object is to provide opportunities for learners to experience for themselves various kinds of "real life" activities, problems and interactions. Simulation makes it possible to learn in a controlled situation without risk to a real library, to other people, or to the learners themselves. This problem-centered method of teaching has resulted in unusually high student motivation and involvement in learning.

Simulation and teaching/learning is based on the use of a library model. Sometimes a model is implied in the exercises. In in-service training, for example, the employing library serves as its own model. More often, for greater precision in learning, an explicit model is used. Some are quite lengthy; others are purposively short.[9]

The classroom techniques of simulation, which make it possible for learners to make decisions and to interact with others in the realistic setting of a model are in-basket exercise, roleplay, action maze and game. These are called "experiential" techniques because by using them the learner experiences within him or herself the intellectual and emotional processes of real situations.

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[9] For two lengthy examples, see "Industrial Library Simulation" and "Governmental Library Simulation" in Martha Jane K. Zachert, Simulation Teaching of Library Administration (N.Y.: Bowker, 1975) 185-201 and 226-251. For examples of shorter models, Part III, C of this text.

GLOSSARY

Simulation: representation of reality for purposes of learning.

In-basket Exercise: a group or series of communications, or a single communication appropriate to the particular environment being simulated; various learning objectives can be accomplished through specific designs. (See Part IV, A, p. 77.)

Roleplay: spontaneous enactment of lifelike situations designed to accomplish learning objectives. (See Part IV, B, p. 82.)

Action Maze: a printed description of an incident, with alternative action choices at appropriate intervals during the unfolding of the situation; presented as a programmed sequence (in a scramble booklet or with latent image technology). (An example will be used in class.)

Game: a win-lose representation of real life with game objectives and game rules, designed for individuals or groups to play against each other in accomplishing predetermined learning objectives. (See Part IV, C, p. 83.)

Simulation learning may be used appropriately when the objectives for learners include the development of problem-solving skills, insight into human behavior, techniques for analysis, skill in designing alternative solutions to problems, and decision-making ability; as well as to encourage participation, involvement, creativity and a desire to learn. Objectives for use with simulation teaching/learning are usually expressive objectives.

FIGURE 5. Methods Recommended for Use with Various-Sized Groups

Number of Learners	Methods for Transfer of Information	Skill Development	Attitude
More than 25	Lecture Panel Symposium Dialogue	Demonstration by projected visuals only Do not attempt unless visuals can be followed by small group or individual practice	Best not to attempt with more than 25
5-25	Lecture Dialogue Panel of 3 Programmed instruction possible	Demonstration (consider projected visuals) Simulation Lab	Simulation Discussion
1	*Reading 1-to-1 discussion Programmed instruction	Demonstration Lab Limited kinds of simulation	Very hard to do 1-to-1 discussion can be tried
2-5	Treat as individual learners	Demonstration Lab Simulation (limited)	Simulation (limited) Discussion

*Reading was not listed in Figure 4 because it is very difficult to get all members of a learning group to read and be prepared for follow-up. It is, however, a valid method to use for the transfer of information and is easier to use in an individualized learning situation. It can be tried in groups of 5-25 in some circumstances to find out how the group responds.

QUESTION FOR THOUGHT

What is a "small group tutorial"? Where, if anywhere, does it belong in Figure 5?

D. DEVELOPING INSTRUCTIONAL MATERIALS

Instructional materials are the actual lectures, exercises, cases, simulations, bibliographies, study-guides--the content in the form or shape in which it is to be used with learners plus aids to study. All of it has to be prepared in advance of intended use.

There are, obviously, levels at which this content preparation can be--and is--planned:

> An ACTIVITY is a series of units and is usually described more precisely as a course, workshop, internship or some other word which connotes an academic or continuing education format.
>
> A UNIT is a series of lessons.
>
> A LESSON or INCIDENT is a series of components.
>
> The smallest identifiable segment of learning--which may be as short as a paragraph in a lecture, a single interaction with a learner, or a few minutes in a classroom--is called a COMPONENT.

These levels (and they may be described somewhat differently by different educational theorists) can be addressed individually in planning, but they must be considered together. They are interrelated, not freestanding.

Specific design at each level is important; happenstance isn't conducive to easy learning. Planned design correlates with planned outcomes; that is, outcomes specified in the objectives. There will, of course, be other outcomes, some of which will constitute learning for the members of the group, but as they are by definition unplanned, they cannot readily be addressed in advance.

List the Topics to be Covered

For any level of planning, and working with your objectives at hand, list the topics of the content which is to be covered. Think of the specific time constraints (there are bound to be some whether the plan is for a curriculum or a single class meeting), and eliminate those topics that cannot be included. Criteria for inclusion/exclusion include:

- relative overall importance
- appropriateness to the objectives, the learners, the long-range goals, the immediate situation
- adequacy of the resources for teaching the topic, including the capability of the available teacher and the possibilities for alternatives or substitutes for the necessary resources

The special interest and immediate need of the learners is an important criterion, especially in motivating adult learners and in gaining their acceptance of a CE or in-service program. Topic by topic, decision by decision, finalize the list. (You may want to designate some of the "excluded" topics as alternatives or supplemental ones in the event of learner options or extra time. If so, remember that materials for these topics must be fully prepared.)

Sequence the Topics

Sequence the topics as they are to be presented. For teaching a procedure the normal step-by-step sequence in which it is performed is best. For historical topics, use chronology, though it may flow from an event forward, from the present backwards, or--combining the directions, so to speak--by flashback. Complex topics are often approached through their components, climaxing with the whole. At other times, this sequence is reversed. General to specific is a familiar teaching sequence; its reverse may also be used. For purposes of emphasis and reinforcement, a spiralling sequence is sometimes used (as in this course in which a model is introduced and explained, then discussed in detail in the sequence of the modules, but spiralling back to the complete model between instructional units).

Selection of Methods in Relation to Topics. Exercise 3.

With the topics ordered (and mindful of the objectives) choose the method that is most appropriate and possible with the given resources and constraints. For example, consider the problem of trying to convey all points of view in the difficult matter of escalating journal prices and shrinking library budgets. The following possibilities (among others) could be considered:

1. have publishers, jobbers and library representatives speak to the learners at individual sessions, followed by questions and answers

2. have a panel of publishers, jobbers and library administrators, with opportunity for interaction and rebuttal

3. let students read in advance and have teacher direct a discussion

4. let students read in advance and play the roles of publishers, jobbers and librarians in a panel

5. let students read and write summaries to hand in for teacher to critique

6. have teacher lecture on various points of view

7. use a videotape of publishers, jobbers and librarians, each presenting their points of view

8. use a series of phone hook-ups for a publisher, a jobber and a librarian to present a point of view and interact with a group of learners

9. have local librarians present a panel of points-of-view (not necessarily their own) then lead small discussion groups with learners

10. ask for volunteers from the learning group to either talk about their own experiences or present views expressed in previously read library literature

Now consider each of the following situations, its potential and constraints. Make a choice among the above methods and record it.

Half-day session at a regional meeting of health science librarians at which publishers and jobbers will be attending as exhibitors.

Choice_____

One day workshop for health science library administrators on "Budget Problems of the 1980's." The topic of journal prices is one of four chosen for "in-depth" consideration. Workshop to be presented in three key cities across the country. Good financial backing.

Choice_____

One day workshop on topic "Serial Management" for paraprofessionals and librarians of small hospital libraries. To be presented as needed, by a Regional Medical Library, throughout its large and mainly rural region. Budget allows one member of RML staff to travel with workshop.

Choice_____

Having trouble with this exercise? What's missing? Objectives, of course. Even though you know in general what the time and budget constraints are, and you can make some assumptions about the entry behavior of the target audience, you really can't select a method without knowing what the

learners will be expected to do at the conclusion of the learning. Try to write at least one behavioral objective for each situation above; now make a selection of method.

Prepare (or Select) Materials

This is the fourth step in the process of developing instructional materials, just after listing the topics to be covered, sequencing the topics, select the methods (now that you have your objectives).

For each designated topic in the outline of content and for each method chosen, some material must be prepared to express or elicit the content. In the examples related to the topic of journal prices and library budgets, the instructor might have one or more of the following materials to prepare:

- a bibliography of readings
- a twenty minute summary from the literature
- introductions, transitions and questions for use with a panel
- checklist of points expected to be covered in student presentations or discussion
- charts or tables of price and budget trends for overhead projector use
- exercise(s) in trimming a journal list or a budget

The instructor might also have to write letters and make phone calls, even plan and produce a videotape. Selecting textbooks and commercial or professional videotapes or movies can also be part of the preparation of materials.

If simulations are to be used, the instructor will have to design them because there are none for health science libraries available commercially. The design of simulation materials, especially games and action mazes, requires special study, detailed instruction in which is beyond the limits of this course. See the bibliography (p. 55-58) for suggested reading.

Develop Schedule or Calendar for Instruction

Begin by setting down the opening and closing dates/ times of the total period available for the instruction. List (in appropriate places) and mark out time for:

introductions, "housekeeping," pretests, closures

holidays, shortened sessions, breaks and other constraints beyond instructor's control

reviews/quizzes/exams or post-tests

unchangeable dates or times for visiting speakers, films, field trips

The remaining time is your discretionary time. Note applicable deadline dates or times and then allocate your units or lessons. You now have a complete calendar or schedule. You may choose to share it with your learning group or not. Many adults like to have times and activities firmly set forth and they consider such a schedule to be a contract between you and them unless you firmly warn them it is "only a guide." If you need to be very flexible (and many objectives require you to be so), you may be best-advised to keep your schedule to yourself except for its general outline.

"Incident-Specific" Designs as Shortcuts

Preparation time can be shortened by using designs for certain specific teaching purposes that have been well-tried and proven successful. I call such designs "incident-specific." For example, a successful lecture design for the purpose of transferring information is usually composed of the following elements in this straightforward sequence:

State the topic or message of the lecture
Explain each component
Illustrate the message, or several of the parts;
or apply the message to one or two situations

Restate the message
Provide transition to whatever learning experience is to follow, for example, a question and answer session, a group discussion, lab, follow-up assignment, or whatever

A series of lectures, whether in a week-to-week course schedule, or in presenting sub-topic after sub-topic during a workshop, would be monotonous without internal variation in this design, but the design itself can be a constant used over and over.

To illustrate variation within this design, consider several ways to state the message. One or two simple declarative statements are often used:

... "Today we're going to talk about the governance of networks."

... "The next step in the process is to encumber funds. We'll consider both 'why?' and 'how?' in this session."

... "Several experts have interpreted the theories related to motivating employees. Let's look at who these experts are and what they advocate."

For variation, a short example or case might be used to introduce the topic and stimulate interest by showing to what it applies. A "trigger film" is short by definition and could combine media and lecture effectively.

Two additional incident-specific designs are:

For Group Discussion:
present questions for discussion
let the group brain-storm
evaluate ideas and arrive at consensus
summarize (if multiple groups are used, have reporters summarize for each to the entire audience)
may add illustrations or additional ideas
restate major points

For Demonstration:

- define procedure and equipment
- run through each step, using equipment
- explain and/or illustrate
- run through again if complex
- state application to other situations
- final restatement

E. EVALUATION: ITS RATIONALE AND DESIGN

Evaluation. It's a complex process. Why do we bother?

We bother because of the concept of accountability and because priority decisions have to be made about the use of limited resources as well as about the performance of one individual in comparison with that of another. "Accountability" is the idea that everyone who has a financial stake in an activity should have an accounting of the value or outcome of the activity. In education this means the learner, the funding agency and the teacher. Indeed employers, who frequently fund continuing education, and who put considerable money into seeking the "best prepared" products of our graduate educational system, also have a stake.

It's easy to say, therefore, "Evaluation is feedback." But feedback must be to some purpose because it assumes that, in the circularity of a planning system (i.e., Figure 3, p. 10) it will be used in decision-making, either maintaining the status quo of the system or changing it. In current practice, feedback typically goes to the learner, the teacher, the funding authority (including, probably, employers), or, in the best systems, to all these.

Feedback assures the learner that learning has taken place and helps make the decision to continue with more of the same or to change direction; or, the feedback shows that learning has been minimal and this information helps the learner decide to repeat, perhaps to change the level or mode of learning attempted.

Feedback to the teacher serves the same purpose: it speaks to the decision to remain constant in various aspects of the teaching or to change in some way that will benefit the learners and the system. In some academic situations, it provides part of the basis for promotion and tenure. Feedback from evaluation also tells funding authorities whether expenditures on teaching are resulting in desired learning; it may even suggest ways to change that will reduce costs or improve effectiveness.

The complexities of evaluating occur for several reasons. In many instances, different information must be gathered to serve the purposes of important recipients--learners, teachers and funding authorities--in order to answer their different cost-benefit questions. Complexities also occur because of the limitations of the data-gathering methods available and cost/benefit questions relating to them. Make no doubt about it, evaluation raises cost/benefit questions, and trade-offs will probably have to be made.

Relating Data Collection to Learning Objectives

The basic questions to be answered in relation to learning are: What does the learner know (about the subject under study) before the teaching/learning process begins? What does the learner know at the conclusion of the process? The difference between the two is, by definition, the learning that has occurred.

These questions are sometimes put in terms of changes in the learner's behavior. What is the learner able to do at the conclusion of the process that could not be done in advance of it? Thus it is of critical importance to know what is being attempted in the process, that is, to have specific learning objectives which can be measured.

Figure 6. Basic Design for Relating Evaluation to Learning Objectives

One pre-assesses or measures entry behavior in order to establish a baseline of knowledge, skills or attitudes. Lacking a formal pre-assessment means the teacher/evaluator has to proceed on assumptions about the learners, assumptions which may or may not be valid, but which will surely affect the cost/benefit ratio of the learning activity. Lacking a formal pre-assessment the learner may also have to proceed on assumptions which, again, may or may not be valid but which will affect the learner's cost/benefit ratio.

The sequence shown in Figure 6 does not relate only to the beginning and end of a learning activity such as a workshop or a course. It can also be used internally for a smaller bit of instruction such as a unit or a specific experience such as a lecture or a demonstration. It may be used to determine whether the learner is ready to proceed to the next bit. (You must be able to interpret various bibliographic citation forms before

you can verify an ILL request.) Or it may be used to determine whether or not the teaching material is doing the job. (A substantial number of "don't-know's" or "can't-do's" indicates a need for revision.) Obviously, when such a post-assessment is made during a learning activity, feedback which can change the remainder of the activity is available for both the learner and the teacher. Sometimes, however, feedback can improve the teaching for the teacher only the next time around.

Determining the kind of information that is relevant to the specific objectives of the learning is, as already pointed out, an important part of the planning process. This determination is needed in order to design appropriate evaluation just as much as it is needed to design appropriate instruction. Consider, for example, the three major kinds of instruction we deal with in teaching various aspects of library science and the kinds of assessment most appropriate for each.

Figure 7. Kinds of Assessment Appropriate to Certain Kinds of Teaching/Learning

Teaching/Learning Categories	Assessment Methods of Choice
Transfer of information	Testing Observing Performance
Skill development	Observing Performance
Attitude building	Observing Performance Attitudinal test Interview

Group problem analysis is a method of choice (under some circumstances) for diagnostic evaluation before instruction is designed, for assessing attitudes related to immediately-concluded instruction. Interviewing may also be used for accomplishing these purposes one-to-one.

Data Collection

Viewing evaluation as feedback reminds us that it is an inquiry process; it must generate information that can be used to answer questions. It is dependent, for arriving at valid conclusions, on obtaining valid information. Fortunately, there are standard data collecting procedures which can be used, and standard ways of organizing these data into meaningful patterns of information. Figure 8 analyzes the data collection procedures most commonly used in the evaluation of teaching/learning activities.

Figure 8. Data Collection Methods Applicable to the Evaluation of Educational Activities

METHOD	ADVANTAGES	LIMITATIONS	DOS AND DONTS
TEST: a set of questions, problems or exercises for determining a person's knowledge, abilities, attitudes or qualifications. TYPES: Subjective (essay); Objective (true-false, multiple choice, fill-in, matching); Performance (simulation)	Useful as diagnostic tools to identify specific areas of deficiency Helpful in selecting from among potential trainees ones who can most profitably by trained. Results are easy to report and compare.	Tests validated for specific situations are often not available. Tests are second-best evidence compared with job performance. Tests can be difficult to prepare and costly to validate.	Know what the test measures. Apply results only to factor for which valid. Don't use tests to take blame for difficult decisions that management should make.
QUESTIONNAIRE: a form, used for gathering data; consists of a list of questions to be submitted to one or more persons. May be closed or open-ended. May be used for manual or machine analysis.	Can reach many people in short time. Is relatively inexpensive. Gives opportunity for expression anonymously, if so planned. Yields data easily reported and summarized.	Little provision for free expression or unanticipated responses. May be difficult to construct; must be tested. Has little effectiveness at getting at causes of problems or possible solutions.	Pretest and revise questions and format. Offer and safeguard anonymity if at all possible. Use only if prepared to report favorable and unfavorable responses.

METHOD	ADVANTAGES	LIMITATIONS	DOS AND DONTS
INTERVIEW: Structured meeting between teacher or researcher and a subject to collect information about subject's knowledge, views.	Reveals feelings, causes and possible solutions of problems as well as facts. Affords opportunity for free expression of opinion, giving suggestions.	Is time-consuming, especially one-to-one, so can reach few people. Interviewer must be trained; special skill required for group interview. Results can be difficult to quantify, report or compare. Can make subject(s) feel "on-the-spot." Interview can influence the interviewee.	Pretest and revise interview format. Be sure interviewer has necessary skills. (listening, noncuing, handling problem subjects). Do not confuse data-gathering with interviews to sell, interpret or educate. Avoid asking for personal or secret information.
OBSERVATION: Act of noting and recording facts or events for later analysis.	Can see how learners use information or skills, rather than how they can verbalize. Can yield data easy to summarize, report and compare.	Is time-consuming. May be inappropriate for groups (almost one-to-one by definition). Presence of observer can be inhibiting. Observer must be trained. Can raise ethical questions.	Train observers. Use pretested checklists of desired behavior. Report favorable and unfavorable data.

METHOD	ADVANTAGES	LIMITATIONS	DOS AND DONTS
GROUP PROBLEM ANALYSIS: Planned but usually unstructured process whereby consultant works with group to help them identify and diagnose their problems.	Same as interview plus: Permits synthesis of points of view. Promotes consensus. Builds support for needed training. Is itself training in group skills.	Is time-consuming and initially expensive. Supervisors, administrators may feel too busy to participate. Requires trained consultant. Results may be difficult to quantify, report or compare. Consultant can influence outcome.	Do not promise results. Start with problem known to be of concern to group. Identify and report all problems of concern to group. Let group make analysis, set priorities.

Two specialized bodies of knowledge may be needed by the embryo teacher in planning evaluation. One relates to the construction and interpretation of tests; the other to research skills in data-gathering and interpretation. Several standard works on each are included in the bibliography. You are also referred to your local institution of higher education where courses will be available.

The data collection methods discussed thus far relate to gathering information about the learning which has taken place as a result of your teaching--the "benefit" of the cost/benefit formula.

Data must also be collected about the costs. Gathering these data may involve you with the accountants in your organization. The categories of data you will need include, at the least:

Direct costs: time and salary data for the planner, presenter and all specialists who participate in the planning, presenting or preparation of materials (e.g. media specialists), including evaluation materials.

purchase prices of all materials used.

purchase/lease of equipment

lease or other direct cost of providing teaching/learning facilities

Indirect costs: overhead and/or support services

record-keeping

lost time from other activities or hiring substitutes (for CE and in-service training this includes teacher's time and learners' time)

Cost data will have to be presented, obviously, in dollars. Benefits must therefore be converted to dollars if direct comparisons are to be made.

Complexities of Evaluation

In addition to the problems of constructing valid instruments for use with all of the assessment methods that are appropriate in library education, there are some problems that relate specifically to the evaluation of adults and to the major activity formats used for continuing education in library science.

Testing immediately, or very soon after, the teaching/learning activity is a major problem for adult learners in typical all-day workshop situations. Short-term memory becomes more difficult with aging; reinforcement and relaxed contemplation are necessary to achieve the high levels of recognition and recall necessary to pass tests successfully. Thus end-of-the-workshop testing of cognitive learning is not conducive to high scores--or to the peace of mind of those who spend the day knowing they'll be tested at its end. (Low scores don't look good in reports to funders and employers, either. Worse, they may misrepresent the actual learning.)

Evaluating skill development by observing performance is virtually impossible at the end of a workshop. Even to mount a simulation of the real world in which performance will take place is prohibitively expensive or inconvenient. Additionally, the nature of skill is such that it is achieved only with practive, correlation and reinforcement. To observe for competency, not to speak of excellence, in skills such as negotiating reference questions, planning search strategies or presenting budget requests, cannot be done immediately after introducing these skills, or even after explaining the cognitive ideas which the skill calls into use. Valid evaluation of skills

can be made only after time has passed between the instruction and the test. How much time? Undoubtedly different for different skills, but we really don't know how much time pasaage makes for valid results in library science skill evaluation.

Problem-solving is the most difficult skill to evaluate directly or soon after the learning activity, but all employers want problem-solvers on their staffs. And all librarians who take CE courses seem to want to be problem-solvers. Problem-solving is characterized by a combination of analytical, cognitive and communication components, often accompanied by the need to make difficult judgments--a host of skills which together solve the problem. Or sometimes do not solve it. This kind of learning is closely related to that called "performance learning." It has been described as "an aggregate of behavior and an amalgam of cognitive, affective and psychomotor influences." The difficulties of evaluating this kind of learning are recognized.[13]

How is problem-solving--or professional performance--taught? By combinations of information transfer and demonstrations, and by simulations and exercises which are trial runs of increasing complexity and difficulty. And how is it to be evaluated? By solving problems, by performing, i.e., by demonstration on the part of the learner. Very difficult in typical continuing education situations. And when, in relation to the instruction, is the evaluation to take place? Again, only after more or less time, depending on the learner's immediate response to the instruction, opportunity to practice and to gain and incorporate feedback into subsequent behavior.

Finally, there is attitude-building. How is anyone to say when an attitude is fully developed? How fair is it to evaluate a learner before time has passed with opportunities and experiences to allow newly-hatched attitudes to mature? The method of choice for the evaluation of attitude development is, again, demonstration on the part of the learner, usually on the basis of day by day behavior observed over time. Attitudinal tests can be devised for short term use, but they are very expensive to construct with validity.

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[13] Sam Leles and Robert J. Cruise, "Improving Educational Evaluation by Appropriate Use of Knowledge, Product and Performance Learnings," Instructional Technology 16 (January 1976),42.

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PART III. IMPLEMENTATION SKILLS

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PART III. IMPLEMENTATION SKILLS

The best-laid plans come to little if their implementation is not well carried out. Frequently, a skillfull planner is not rated highly for the presentation of his or her own plans, and no particular significance should be attached to this fact or to the difference between those who participate in different ways in which each person is most effective in producing the desired learning, i.e., in assessing needs and results, in planning, in producing materials or in presenting.

"Implementing" seems an awkward word for what many think of as the total act of teaching. This course is designed to emphasize planning, and to separate discussion of planning (Part II) from discussion of carrying out plans effectively (Part III). Further, "implementing" is used to convey the idea that there is more to carrying out plans than "presenting" which, for many, comes down to lecturing. There is a great deal more to implementing than lecturing, relevant though that skill is, as Part III will try to show.

Indeed, it may well be more cost-effective to separate the planning from the implementing of instruction, especially in on-going programs such as MLA's CE Program or a library's bibliographic and in-service training programs. In a cost-effective program some people are planning, some presenting or otherwise implementing plans, perhaps only a few are doing both. Some persons may even be involved in the coordination of programs without necessarily doing either the planning of instruction or its implementation. The question of cost-effectiveness and the relation to it of one or more individuals in planning, implement ing or coordinating should be carefully studied in individual situations.

A. ATTITUDES

The top rated teaching attitude in the eyes of most learners is enthusiasm. Research about learners' perceptions of teacher performance and the relation of these perceptions to their own learning demonstrates this on all learning levels, but especially in higher education.[1] According to this research, enthusiasm is closely related to the teacher's active involvement in the matter being taught, and to the teacher's own interest in continuing to learn that particular subject

[1] Kenneth E. Eble, Professors as Teachers (San Francisco: Jossey-Bass, 1980).

or skill.[2] It is important for the teacher who is actively involved and interested in continuing to learn to make this attitude obvious to the students. It follows that the teacher who has become less involved or less interested in the matter at hand should acknowledge this self-change and consider giving up this particular teaching, or find ways to rekindle the original attitude.

What exactly do learners see, hear and feel that leads them to call a teacher "enthusiastic"?

> In the research on enthusiastic teaching, the word means 'stimulating', 'animated', 'energetic', and 'mobile'. It has been found that all other things being equal, a teacher who presents materials with appropriate gestures, animation and eye contact will have students who achieve better on tests than will the teacher who does not gesture, reads in a monotone, and generally behaves in an unenthusiastic manner.[3]

The importance of body language is unmistakable. Gestures and movement, facial expression, eye contact and tone of voice carry their own messages, in addition to those of the subject supposedly being taught. These bodily messages are being sent out at all times: while the teacher is speaking, certainly, but also, perhaps most significantly, while the teacher is listening or observing. General animation is particularly indicative of interest in both subject and in the learners themselves. (Note tips in following sections of Part III.)

In addition to enthusiasm, other attitudes which are rated highly by adult learners include consideration for others, fairness to all, positive self-perception and flexibility of the teacher. These atttidues are important in the classroom because they facilitate learning. They arouse interest. They maintain interest. They motivate. Additionally, and some would say even more importantly, they are important because of the model they present to learners. It is characteristic of people that we imitate behavior we admire, find pleasing or aspire to for ourselves. Especially at times

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[2]"Teacher Enthusiasm: A Factor in Stimulating Student Learning," Practical Applications of Research (Newsletter of Phi Delta Kappa's Center on Evaluation, Development and Research)3:4 (June 1981), 1-4.

[3]Donald R. Cruickshank and Associates, Teaching is Tough. (Englewood Cliffs, N.J.: Prentice Hall, 1980), 212.

of transition, such as entering a profession or moving to a new job level, people use modeling as a significant way to learn. As teachers of health science librarians and health professionals we need to display the kinds of behavior we want them to achieve, whether this behavior reflects attitudes or professional skills.

One of the most revealing questions I am asked in presenting this course is "How do you psych yourself up to teach?" The question asks very directly for information for modeling. Though it and similar questions ask for personal information, they deserve honest, careful answers and should not be turned aside or answered diffidently. (The latter behaviors would say "I don't want to share with you.") Personal answers to questions related to modeling do not encourage mere imitation. Rather, they help the learners understand one teacher's behavior, assess its value to themselves, perhaps "try it on for size." By trying a behavior used by a respected teacher, the learner learns--and either builds on it in personal ways, or rejects it for personal cause and goes on to model other behaviors.

Modeling is acknowledged by educational psychologists to be an "inspiring power force for learning."[4] Let's use it to advantage.

"Effective" is the accolade usually awarded to those who are especially skillful in the implementation of teaching/learning plans--those who, in the opinion of the learners themselves, facilitate learning. The term "effectiveness" became the distinguishing identification of a movement in the public schools in the 1970's, and it crops up with some frequency in discussions of upgrading academic teaching and of motivating workers to participate in professional or industrial training and continuing education. The teacher effectiveness movement is related to the personal effectiveness movement originating with Carl Rogers nearly two decades ago, as well as to the more recent general interest in transitional analysis. Each of these latter movements is reflected in numerous books and articles for those who wish the full background. Some of this literature of more than a decade of emphasis on teacher effectiveness is of value for library science instructors; examples are suggested in the bibliography.

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[4]"Teacher Enthusiasm ..." op. cit., 4.

B. LECTURING

Although the ineffectiveness of lecturing in terms of retention of information by learners has been demonstrated repeatedly by research, it is still the number one method used in professional education and in bibliographic instruction. Why? Too often because the instructor lacks other skills. However, when lecturing is used for specific reasons, as pointed out in Part II, and when it is skillfully used, it is one of the teacher's most effective ways to convey information, to synthesize ideas, and to stimulate discussion. How can these positive outcomes be achieved? Planning, and practice are essential, but consider also the following "tips."

Limit your content to what has been promised in stated objectives and in your introduction. If "related information" is essential, revise your objectives; if it isn't, leave it out because its relevance won't be obvious to your listeners.

To stick to your objectives, use an outline, or at least a list of key ideas--in order of presentation, perhaps even one annotated with approximate timing.

Try to simplify complex ideas and constructs rather than treat them exhaustively in a single lecture. If the material must be treated exhaustively, divide it into several lectures and vary your method of explaining the complexities, e.g., with glossaries, models, media.

Watch for feedback that suggests clarification is needed--and insert it. Restatements in simpler terms, definitions, examples help to clarify. Simple repetition of key ideas also helps. Transparencies and chalk boards can provide a change of pace and help to explain.

Research suggests strongly that effective listening ceases after twenty minutes unless it is lengthened by attention-getting devices such as change of pace, demonstrations, audience interaction, or a touch of humor. Prepare to inject these. But also prepare strong transitions to get listeners back to the main line of ideas after each "breather."

Use examples within the experience of your learners, or very closely related to their work situations. If you know that you will have a diverse audience for a particular workshop or other activity, prepare multiple examples and use two rather than one to make each point.

Even when you allow yourself plenty of spontaneity in the body of your lecture, prepare your introduction and your conclusion in detail. Practice them carefully and keep them written out in front of you if necessary.

Speak with a generally rapid delivery (indicative of enthusiasm and your acknowledgement that learners are following well), but offer frequent changes of pace (for emphasis, to accommodate notetakers) and pauses (for momentary relaxation, to allow learners to shift position without being distractive, and especially to encourage questions or input from the learners).

To show enthusiasm, use varied facial expression, including emotive ones. Wide-open, rapidly moving eyes, lifted eyebrows, up-curved lips convey animated acceptance of ideas and feelings. A tilt of the head plus upraised eyebrows and widening eyes accent a point, especially in a lecture (typically characterized by less facial expression than is used during interchange with learners). Direct eye contact is used as a cue to the learners to speak, as a challenge to agree or disagree, as a signal that the teacher is willing to listen. Or that the teacher is actively checking learners' understanding, acceptance or feeling. Skillful use of eye contact with groups is probably the most effective component of body language.

Change position in the vertical plane, bending, sitting, standing, as well as moving toward and away from the group of learners. Standing, especially behind a podium, is most formal--to be used in straightforward, intensive transfer of information. Sitting is less formal, but gestures must be used to keep the group involved and to cue them to participate. Walking toward the group, speaking briefly to one individual (but loud enough for all to hear) is most informal. Combined with gestures as cues, these latter movements encourage participation, relieve tension, offer an often welcome respite from intensity. Demonstrative gestures and dramatic movements have most value when used infrequently and for special purposes.

C. LEADING/GUIDING DISCUSSION

The distinction between leading and guiding a discussion is a real one. Leading--by the teacher--is used as a follow-up to an assignment or a lecture. It is for the purpose of testing learners' comprehension, reinforcing key points, bringing to light additional examples. (Allowing questions from the group for clarification is a part of lecturing but it is not to be confused with a discussion.) Discussion may

also move into new content by asking students to apply the ideas to new situations, or to examine the ideas critically. Or discussion may combine these functions. Leading is used with learners who are beginners in the specific information at hand, or when the teacher has the major responsibility for input through specific assignments or lecture. The teacher should know in advance which purpose(s) are to be met, or which will be allowed if learners move away from the original purpose. The teacher's role in leading discussions is to encourage, to correct, to reinforce and to hold the group to the given content.

Guiding, on the other hand, is used in situations like seminars in which all students have prepared on their own initiative by reading or observing. The learner-selected ideas or data are the content for discussion. The purpose of this kind of discussion is to bring significant information to bear on a pre-determined, broadly stated question, and to examine the ideas or data critically. Guiding is used when the responsibility for input is on the students. Individual learners may speak at length to explain their input, or in critical examination of another's ideas their comments may be brief and crisp.

Guided discussion may also be used in problem-solving situations. Given case studies or the learners' own problems are set before the group. The purpose here is for the learners to analyze, synthesize, propose alternative solutions, challenge these by evaluation or new data. The teacher's role in seminar or problem-solving is much less central, usually limited to that of referee, although the teacher must be ready--if criticism is an objective--to move into leading if the members of the group are unresponsive or fail to make necessary points.

Tips, to help you develop as a discussion leader or guide, include the following:

> Closed questions--those with limited or predetermined answers--are appropriate when you are leading a discussion. Supply yourself with them in advance and keep them close at hand. Know when you want to spark or reinforce memory and when you want to stimulate application to new situations. Prepare your questions accordingly.
>
> Open questions are the opposite. Their answers are drawn from a wider range of information and/or more complex thinking on the part of the learners. Some research has shown that when open questions are used more salient points are brought up and these points are better integrated by the learners than when closed questions are used. My experience

with library school students and librarians suggests that open questions, to be successful, depend on use in a problem-solving context, and on the experience or preparation of the learners. I feel both kinds of questions can be used successfully, but for different purposes. Open questions are definitely more difficult to plan in advance. Nevertheless, provide yourself with a few "starters."

Be prepared to wait for responses. Silence can be endured. But if you are guiding, allow time to think. Do not use pressure. Intervene in learners' thought processes only if they seem completely stuck.

D. DEMONSTRATIONS

Demonstrations deal with objects and processes. The teaching mode is descriptive, showing and telling. Two requirements for successful demonstrations are: (1) All learners must be able to see; sometimes this includes very small details. (2) There should be a recognizable order or sequence to the description.

Tips for successful demonstrations include:

Advance preparation is essential, especially the arrangement of work space. If learners are to have a practice session after the demonstration, their work space should also be arranged in advance and exactly like the workspace used by the instructor.

All equipment to be used must be checked out in advance. Spare parts, or emergency equipment, must be close at hand.

If a complicated process is to be demonstrated, prepare a checklist for your use. At some point, before or after the demonstration, provide learners with copies of this checklist.

When demonstrating equipment, always begin by naming and stating the function of each part that is important in using the equipment. Then demonstrate how the equipment is used, calling each part, as used, by its correct name. Display normal use first. Then, if your plan calls for teaching the management of malfunctions, move to exceptions and "first aid."

Be very alert to visual problems that might occur for some learners if the group is large or if learners are seated or standing at an eye level that

makes seeing difficult. Be wary of giving demonstrations if learners have to be more than a few feet away from the instructor's work space. In problematic situations, switch to media visuals so everyone can see details. THIS CANNOT BE DONE AT THE LAST MINUTE.

Always give your demonstration in slow motion first. Allow plenty of time for questions. Then, if necessary, run through it again at the speed you want learners to attain.

When learners are practicing, be present to observe, to correct them, and to answer additional questions.

E. MANAGING CLASSROOM ACTIVITIES

This skill is simply that of making things go smoothly with the least possible distraction for the learners. Tips include:

Have an agenda, whether or not you choose to share it with your learners. Adults prefer to have some idea of what is coming and in what sequence. If you prepare, and distribute, a timed schedule, adults will expect you to stick to it closely. If you prefer to be more flexible, limit your distributed agenda to the sessions and their topics. In either event, do relate your agenda to the stated objectives for the activity. This may be done orally, as part of your introduction to the activity, rather than in writing. (It makes a rather long, complicated document to use as a handout, or to read during the introduction.) If it becomes necessary to change the agenda, tell your group that you are doing so and why.

Time the components of the learning activity as carefully as you can, at least for your own guidance. Be sure to allow time for such non-instructional components as (1) introduction to the activity and the presenters, (2) breaks, tests or other evaluations, moving from place to place if this is to be done or getting set up for demonstrations, exercises or small-group activities.

Give clear directions. Say "Do this," and "Do that." If the directions are complex, as at the beginning of an exercise or a simulation, begin with "When I give this signal, do so-and-so." If the signal is to be an unusual one, tell them what it is to be. If you do not do this, as soon as you have given the

initial part of the directions, some people will begin to follow the first step--thus creating confusion and distraction. If the activity is to be timed, or limited in any way, announce this also at the beginning.

If a large group is to be broken into sub-groups for some purpose, do so first, before you give the directions for the activity. Then, when everyone is rearranged and settled, give the directions. Before they move, tell then "You'll come back to your present place after this activity is over," and tell them what to take with them to their new location.

If there are to be several small-group activities during a single class period or workshop, divide the group differently for each in order to gain a new "mix" of learners for each. Here are three easy ways to do this:

By seating proximity.
Counting off, by the number of groups you want. (This puts the same, or nearly same, number in each group.)
By word association. You say a number of words and ask each learner to go to the "word group" with which he/she feels a personal relationship. (You can use this one only when it doesn't matter if the groups are not all the same size.)

Giving clear directions is especially important at break times, and relates to your ability to begin promptly at the end of the break. Be sure to tell your group:

. . . where necessary facilities are located (restrooms, staff lounge, coffee table, restaurants)
. . . what time to reconvene (in minutes, and on the clock)
. . . where transportation is located, if this is a factor

F. CONDUCTING EVALUATION

The conditions under which evaluation takes place are very important, in relation to the kinds of results obtained, whether it is evaluation of an activity or evaluation of the learners.

Having enough time to do the job is essential. Allow for time for the evaluation in your agenda, so that learners are not in a position of being handed an evaluation form or a test at the time they thought the activity would conclude.

Have all necessary forms or tests ready in advance, with enough copies. Have any special equipment needed ready also, for example, number 2 pencils for computer-scored tests.

Announce at the beginning: where to write names, or that the evaluation is anonymous; whether to use pen, pencil, a special form...or whatever the necessary means of recording.

Make sure that each learner has an equal opportunity to respond to evaluation form or test under the best possible conditions.

If you use tests, be sure the grading and reporting is fast and fair. Never announce grades in front of a group, nor hand out papers in such a way that a grade is obvious to those seated nearby. If the test results are negative, let the learner know this in private if at all possible.

G. USING MEDIA

Remember, this means using media effectively. The tenets are the same as for any other instructional methods: Learners differ and learning groups differ. Be prepared to experiment. Both content and kind of media should be appropriate for the learning group. Creativity counts--up to a point, and that point is short of wherever the creativity interferes with learning by distraction. Within these tenets, the following tips apply especially to using media:

Thorough preparation is essential, including handling the hardware, all of which must be checked out in advance.

Have your software prepared professionally if at all possible. If not, consult one of the many manuals available to find methods you, as an amateur, can carry out satisfactorily. Allow plenty of time for the preparation of software. It is NOT an overnight process.

Work especially hard on preparing titles for use with your visuals. Each title should be brief and communicative. Use appropriate, professional lettering, keeping in mind the overall proportions of your transparencies or slides.

Have your "first aid kit" handy during presentations, especially an extension cord, adapter plugs, and extra bulbs. Know what you're going to do if the current goes off.

Use a sufficiently large screen. Position it properly in relation to both your projector and your viewers. Adjust the screen-to-projector distance to gain the best size visuals for the audience.

Avoid overkill. A whole day of slides is as deadly as an eight hour lecture. If the use of multiple types of media is too expensive in time or money, then justapose one medium with mini-lectures, group activities or discussions.

Be considerate to learners. If they're expected, or expecting, to take notes, don't "skim through" your media in the dark; allow time--and light. Because of the necessity of keeping head and eyes in position to see a screen constantly during media presentations, watching such presentations for an hour is more tiring than listening to an hour lecture. Allow more breaks and/or change media as well as pace frequently.

Dramatic effect is NOT a substitute for content.

H. BIBLIOGRAPHY

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A. SIMULATION EXAMPLE: IN-BASKET EXERCISE

An in-basket exercise is a simulation of a part of life in the real library world. It reflects the pervasiveness of communication in that world, and, often, the relationship between communication and decision or action. A piece of paper comes to an administrator's desk and, as a result, a decision must be made. A ringing phone is answered and, as a result, a reference librarian undertakes a task. The relationships, and the feel of cause and effect, or the usefulness of strategies can all be demonstrated by in-basket exercises.

In-basket exercises can be used in several ways:

. . . a single communication can be used as a directive to learners

. . . a series of communications can be used for practice in establishing priorities for action

. . . one or more communications can be used for practice in decision-making

. . . one or more communications can be used for practice in preparing out-basket communications (i.e., out-going communications)

. . . one or more communications can be used for testing

It is important that objectives be clearly stated for in-basket exercises as for any other part of your instruction. These stated objectives then limit the content of the exercise and determine whether the exercise is used in class (with or without specific prior preparation by the learners) or for out-of-class learning.

Whichever kind of in-basket exercise is used to meet whatever objectives, the teacher must remember that, as a learning experience, the in-basket exercise is part of a learning sequence. Adequate preparation for its use must be conveyed to learners, both cognitive preparation to deal with the content of the communication, and instructions as to how to proceed.

Adequate follow-up must also be planned and carried out by the instructor. The follow-up may be a response from the instructor to the learner, or--and this is especially important for in-basket exercises used as in-class activities--the follow-up may be a discussion of the different responses made within the group. It should become an analysis of alternatives and might lead to a group decision as to which response is

most appropriate. Much of the value of using in-basket exercises is lost if they are not considered as part of a learning sequence with emphasis on preparation and follow-up as well as on the experiential task.

Following are examples of a variety of in-basket communications designed to meet different objectives and to be used in different ways. In some of these examples, as in the actual use of in-basket exercises, two or more objectives are combined.

SIMULATION EXAMPLE: IN-BASKET EXERCISE

Example 1. A communication to be used as a directive and for practice in preparing out-basket communications.

Objectives: 1. The learner will gain practice in gathering information on an administrative topic, in this case "insurance for libraries;"

2. The learner will gain practice in summarizing information for top management in an appropriate communication.

M E M O

Midland Hospital
Administrator's Office

To: Hospital Librarian

From: Hospital Administrator

At the next meeting of the hospital Trustees (in two weeks) the subject of insurance will be under discussion. Please brief me as soon as possible on the need for insurance for the library and on professional thinking about various kinds of coverage.

Example 2. A series of communications to be used for practice in decision-making, and for practice in preparing out-basket communications.

Objectives: 1. The learner will make a decision that will have the effect of increasing accessibility to some library material while decreasing accessibility to others.

2. The learner will gain experience in preparing communications with high public relations impact.

Note: The following three communications are to be presented to the learners at the same time. They are to make a decision (individually or as a group) and to prepare an appropriate out-basket communication to each communicator (i.e., one that informs the communicator of the decision).

SIMULATION EXAMPLE: IN-BASKET EXERCISE

M E M O

Central State University
School of Medicine
January 5, 19xx

To: Medical Library Director

From: Dale Marcellos, Associate Professor

I'd like to make a matter of record my satisfaction in using the Library during the past term with my History of Medicine class.

As you know, I came here from Northeastern State University, which has a much larger library, and I was initially concerned about the availability here of source materials. I have found--to my pleasure--that the smaller size of the collection is offset for my purposes by the high proportion of 19th and early 20th century materials. With all this material on open shelves, it has served as an excellent and readily available source collection, and my students have gained valuable experience in researching and presenting historical studies (three of which have been submitted to history journals).

Thank you for the top-notch support I've had from the Library. Please don't hesitate to let me know if I can return the favor.

P H O N E C A L L

January 6, 19xx

To: Medical Library Director

"This is Johnny Alexis in the Physiology Department. I came to Central State last fall and I'm still learning about the University. I'm calling to ask you about a situation that involves the Library.

"One of the first things I did after I got here was to buy four films for use with my classes. My department head o.k.'d this, of course. In fact, she found the money for me because I had used these films in my former teaching position and I knew first-hand how dynamic they are. This morning I met some faculty members from the School of Nursing and I learned in the conversation with them that they already had three of these films in their Human Biology Deparatment. That's about a thousand dollars worth of duplication!

"My question to you is: Why doesn't the Medical Library have charge of buying all films related to medicine and maintain a central listing of what's on campus?"

Your response to this question was in terms of tradition and the autonomy of the teaching departments in the use of their funds. Under prodding from the caller, you agreed to think about it.

SIMULATION EXAMPLE: IN-BASKET EXERCISE

M E M O

Central State University
School of Medicine
Office of the Dean
January 7, 19xx

To: Medical Library Director

From: Dean

At the recent meeting of deans of medical schools in our region, it came to my attention that all of the other schools either have fully developed learning resource centers or, at least, have centralized the dissemination of media materials through their libraries. After talking with other deans I feel that we should make some move in the same direction, although you know as well as I do that we can't hope for either more space or more personnel in the immediate future.

What, in your opinion, are the alternatives available to us? and what is your recommendation?

Points of Information:

1. This is a medical library which serves all units of the University that relate to medical and para-medical knowledge and careers. It originated as the School of Medicine Library and still reports to the Dean of that School.

2. Media production for all units of the University is carried out through University Media Service. Media dissemination and utilization in the various medical teaching units has been left up to the teaching departments, or in some cases to individual faculty members.

3. Library storage space is jammed and all open-stack (except for the Reserve Stacks behind the circulation desk and a small Rare Books Collection in a memorial room). The collection has not been systematically weeded within living memory. Storage space (unlimited for all practical purposes) is available elsewhere on campus, at some distance from the School of Medicine, under closed-stack conditions.

4. Personnel-wise, the Medical Library is in good shape. For some years it was able to extend services and to build staff on the basis of a rather generous budget. Current University-wide retrenchment has caught it with all positions filled, but with no real possibility for adding positions.

B. SIMULATION EXAMPLE: ROLEPLAY

Roleplay portrays especially the human interactions in the real world, the potential--and sometimes the sandtraps--of oral communication. For beginners there are many situations that can be roleplayed without conflict or negative influences. They have both cognitive and, to a high degree, affective learning values. For learners with work experience, elements of conflict and negative aspects of real life can be added in order to make the roleplay more demanding and to provide learners with traumatic life experiences without the real risk and harm in those situations.

Roleplay is used in the group learning situation in relation to any one or combination of objectives related to oral communication and interpersonal relations. It can be especially effective when learners have to gather information in advance and then use that information as part of the group process in attaining a group goal.

Example: A roleplay to be used as an example of an in-library staff planning meeting.

Objective: The learning group will construct an instrument to be used in rating library employees.

Roleplay: Central State University must conform to requirements of the State University System Board of Regents concerning new personnel accountability procedures. As a result of responsibilities assigned through the chain of command from the University President, department heads of the Medical Library meet, on assignment from the Library Director, to formulate an instrument which will be used to rate library employees. The instrument must be one which department heads will use to rate their department staffs, and which will be used by the Library Director to rate the department heads (because every sub-unit of the University is allowed only one instrument).

Roles: Reference Department Head
Technical Services Department Head
Circulation Department Head
Note: If the teacher wishes to increase the number of roleplayers, the Technical Services Department Head could be replaced by a Head of Acquisitions, Head of Cataloging and Head of Binding. A Head of Media Services might also be added. Three to six people will make a good roleplay group size for this kind of objective.

Roleplay Time: 45 minutes.

SIMULATION EXAMPLE: ROLEPLAY

Note: When the product is to be the result of the roleplay action, it may have to be put in final form after the roleplay has ended. All essential elements of the product should be decided during the roleplay and the finalization should take place as soon after the roleplay as feasible. Copies should then be distributed to all members of the learning group.

To carry a roleplay like the above one step further, members of the learning group who did not play roles might be assigned to critique the document as an in-basket exercise. To do this, a letter of request from the Dean of the Medical School should be addressed to the Medical Library Director asking for the Director's comments on the submitted form. This letter would be distributed to the non-roleplayers in the learning group, who would then respond individually in writing.

In this kind of learning situation, I would limit debriefing after the roleplay to discussion of affective aspects of the roleplay. Following the in-basket exercise all members of the learning group would receive copies of all the critiques. A debriefing at that point would elicit a lot of input about the content and form of the instrument, and this would put the learning group in a position to discuss a variety of alternatives.

C. SIMULATION EXAMPLE: LEARNING GAME

Games can be very simple or very complex. They can be person-to-person games, person-to-machine games, or a combination of person-to-person and person-to-machine components. An example of a simple non-threatening game which provides practice in a necessary library skill is the Negotiation Game.

"Negotiation" is a game designed to illustrate to beginners in library work some of the communication problems encountered by a reference librarian in the attempt to discover what a patron really wants to know when a question is asked at the reference desk. One of the most important skills that a reference librarian must learn is that of helping a patron clarify his/her original question so that it tells the reference librarian what the patron is looking for. This process is called the "negotiation of the question."[1] Because the concept and the feeling of this librarian-patron exchange is very hard to explain by the usual lecture teaching methods, a learning game which gives the student the experience of the exchange is the teaching method chosen.

[1]Robert S. Taylor, "Question-Negotiation and Information Seeking in Libraries," College and Research Libraries 29 (1968), 178-194.

SIMULATION EXAMPLE: LEARNING GAME

THE NEGOTIATION GAME[2]

Game Description: The game of Negotiation is played by three players who alternate the roles of Reference Librarian, Patron, and Referee. The Patron begins a round of the game by asking a question drawn from a stack of Q-cards. The Reference Librarian tries to discover, by a series of response-questions, what the Patron really wants to know. The Referee makes judgments about the Patron's answers to the Reference Librarian's questions, and keeps score.

Game Materials: Multiple packets of Q-cards constitute the game materials. Each packet consists of ten cards. On each card there are two questions. The question at the top of the card is the question asked by a real patron in a real library. The question at the bottom of the card is what the patron really wanted to know, as was discovered by a real librarian in a real library through the process of negotiation.

Do you have any information about caves?
How can I make some make-believe stalactites and stalagmites for a science project exhibit?

Game Rules: To initiate play, the Patron takes the first card from the deck of Q-cards, and asks the Reference Librarian the question at the top of the card. The Patron also shows the question to the Referee without letting the Reference Librarian see it. The Reference Librarian must ask clarifying questions of the Patron to try to learn what the real reference question is. Each question counts one point. The Patron must answer honestly (in terms of both questions on the Q-card), but may answer evasively so as to force the Reference Librarian to ask more questions.

[2]"The Negotiation Game," by Martha Jane K. Zachert and Veronica S. Pantelidis, 1970. Copyrighted.

SIMULATION EXAMPLE: LEARNING GAME

After the Reference Librarian perceives--and states--the real question, or after he has asked ten questions, the Referee announces the score and the players change roles. The new Patron draws another card from the pack and asks the question of the new Reference Librarian, showing the question to the new Referee. The game consists of ten rounds, three questions per round (with the players changing roles after each Q-card question) or until a previously agreed on end-point is reached.

Game Roles: Patron: This player acts like a library patron. He reads a Q-card question to the Reference Librarian, and answers the Reference Librarian's questions honestly, but incompletely, evasively, off-target or any other way that may mislead or confuse the Librarian. His objective is to cause the Librarian to have to ask many clarifier-questions.

Reference Librarian: This player acts like a reference librarian. In order to figure out exactly what the patron wants, he responds to the Q-card question with a series of clarifier-questions. His objective is to ascertain the "real question" with the fewest number of clarifier-questions.

Referee: The Referee, after reading the Q-card question silently, monitors the responses given by the Patron to the Reference Librarian's clarifier-questions. If a response is dishonest, the Referee disallows it without counting a point against the Librarian. The Patron must then make another response to the Librarian's clarifier-question.

Game Scoring: Each player playing the role of the Referee must count each clarifier-question asked by the Reference Librarian after the Patron has asked a Q-card question. If, after ten clarifier-questions, the Librarian has not perceived the "real" questions, the Referee stops the questioning and tells the players to change roles. After ten rounds the number of questions each player asked in the role of Reference Librarian is totaled. The player who asked the fewest questions wins the game.

D. CORRELATED EXAMPLE: ROLEPLAY PREPARATION HANDOUT, OBSERVER'S GUIDE, DEBRIEFER'S GUIDE, FOLLOW-UP HANDOUT

The smallest group for roleplaying will be two people. The largest for practical pedagogical purposes is probably about ten. Working with the smallest, the largest, or somewhere in between, it is important to have at least one observer whose responsibility it is to watch the process and/or the content from outside the roleplay. Having no involvement and being neutral in relation to the content, the observer can concentrate on the interaction, take notes and formulate these observations into a critique for use during the debriefing. It is, therefore, as demanding a responsibility as that of roleplay and is as potentially rewarding from the point of view of learning. Observers should be assigned to every roleplay group. In fact, all learners who are not roleplayers should be assigned as observers. Naturally, the instructor is also an observer, making mental or written notes throughout the roleplay.

To be of greatest value for learners, each roleplayer should have its own Observer's Guide. And each Observer's Guide should be correlated with the objectives of the roleplay with which it is to be used.

Observers are often used with games and group in-basket exercises as well as with roleplay. The suggestions for their use with roleplay also apply to using them for other group simulation activities.

It is wise for instructors to also use a Debriefer's Guide, correlated with the objectives of the simulation activity, in order to make certain that no point intended to be covered is forgotten. It is an aide memoire, however, rather than a formal agenda for the debriefing. Although the instructor guides the debriefing by open-ended but purposive questions, responses may lead into various paths. The instructor is constantly making decisions about which to follow, when to continue and when to abandon a path once it has been entered.

The Observer's Guide is prescriptive in that each point or question is to be observed and noted. The Debriefer's Guide is suggestive; the instructor uses it as a springboard to add meaning to the simulation experience.

Following is a correlated example which includes the roleplay preparation handout for the class, the Observer's Guide to be used by all non-roleplayers and the instructor's Debriefing Guide which would be available to and used by the instructor alone. A final checklist, also included, might be worked out by instructor and class during the debriefing, or prepared in advance by the instructor and handed out at the end of the completed activity.

PREPARATION HANDOUT

A PROBLEM IN OBTAINING THE SERVICES OF A CONSULTANT*

Objective: To provide practice in . . .

. . . seeking help from a consultant

. . . phrasing an invitation to a consultant

. . . conveying information to a consultant

. . . negotiating with a consultant

Situation: You are the chairperson of the recently appointed Staff Development Committee of a medium-sized library (30-40 professionals and paraprofessionals). You want to make an initial "splurge" that will please the Committee's well-wishers and convince the doubters.

The Committee has chosen the topic "Communication" and wants to have a staff workshop. The administration of the library has agreed that the workshop will be held at a known slack time, and that the library will be operated by a substitute "crew" with one supervisor on call, so that the entire staff can attend.

Your total budget is $350, of which you think the consultant's travel expenses will require $200, the fee $125, leaving you with $25 for coffee breaks and incidentals. You plan to invite the consultant to bunk in your apartment and three staff members have offered dinners and lunch.

Since you have a WATS line available, you wisely decide to call the chosen consultant (whom you have never met) in order to talk over the whole idea.

The phone is ringing. . . .

Roleplayers: Chairperson of Staff Development Committee
Consultant

Roleplay Time: 5-10 minutes

*c MJ Zachert 1975

OBSERVER'S GUIDE

Did the roleplayer ...

... remember courtesies?

Introduction of self	Y_____	N_____
Appreciative closure	Y_____	N_____
Offer follow-up, if appropriate	Y_____	N_____

... indicate immediately and specifically that help was being sought in the form of a consulting job Y_____ N_____

... state clearly the context in which help was sought? Y_____ N_____

... state clearly the nature of the help? Y_____ N_____

... convey the essential information immediately about the task? Y_____ N_____

... negotiate? Y_____ N_____

Did the roleplayer convey an impression of (circle one descriptor on each line)

flexibility ... wishy-washy-ness ... rigidity

friendliness ... matter-of-factness ... condescension

concern for the consultant ... unconcern

creative participation ... acceptance ... aloofness

DEBRIEFER'S GUIDE

First, debrief the roleplayer(s):

How did you feel during the roleplay?
What emotions did you experience?
Were your negative emotions reduced during the roleplay?
If not, why not?
Were your positive emotions reinforced during the roleplay?
If not, why not?

Did you accomplish your task objective? If not, why not?
What factors hindered you?
What factors helped you?

If you were to find yourself in the same kind of situation again (in roleplay or in real life), what changes would you try to make in your behavior?

Second, debrief the observer(s): (N.B. Often there will be interaction between the roleplayers and the observer(s). Allow for it, but don't let one group usurp the other's debriefing.

What did you observe about the roleplayers' feelings?
What kind of evidence was present in body language? facial expression? tone of voice? strategies?

Did the roleplayers accomplish the task objective?
If not, why not?
What factors hindered accomplishment?
What factors facilitated accomplishment?

Third, if there are discrepancies between the perceptions of the roleplayers and the observer(s), try to resolve them and to talk about the reasons for them.

SUGGESTED CHECKLIST FOR NEGOTIATING WITH A PROGRAM CONSULTANT

The task? The objective?

- talk? ... that is, transfer of information
- direct a group of people in an activity? ... that is, manage and/or teach
- plan with a group of people? ... that is, develop ideas of others, guide and direct, contribute ideas

Single or recurring contact?

Time frame?

- one shot?
- limited series?
- continuing? ... how long?
- dates? ... firm or flexible?

Local support available?

- media services?
- xerox?
- personnel?
- space?
- food service?
- lodging?

Evaluation of activity ... whose responsibility?

- in-house?
- consultant?
- team?
- outside observers?

Right to materials used in activity?

- sponsor want to publish?
- sponsor want to reuse?
- consultant free to reuse or publish?

Payments?

- plane or car?
- plane (or car) plus per diem?
- all out-of-pocket expenses? lodging only?
- prepay by consultant? sign for hotel?
- meet consultant? or find own way to door?
- consultant's fee?